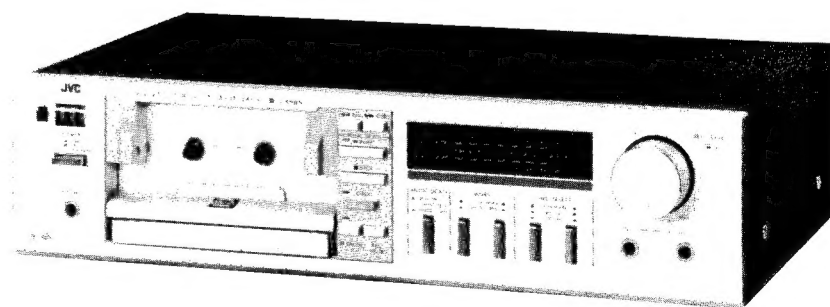


# JVC

## SERVICE MANUAL

MODEL  
**KD-D3A/B/C/E/J/U**  
STEREO CASSETTE DECK



No. 4196  
January 1981

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## Specifications

Type	: Component stereo cassette deck	Bias	: AC bias
Track system	: 4-track, 2-channel	Erasure	: AC erasure
Tape speed	: 1-7/8 inch/sec (4.8 cm/sec)	Heads	: Metaperm for recording and play-back 2-Gap ferrite for erasing
Frequency response		Motor	: Electronic governed DC motor
(-20dB recording)		Fast forward time	: 105 sec. with C-60 cassette
Metal tape *1	: 30 - 16,000Hz (Nominal)	Rewind time	: 105 sec. with C-60 cassette
	40 - 15,000Hz $\pm$ 3dB (Typical)	Semiconductors	: 7 ICs, 25 transistors, 23 diodes, 18 LEDs, 1 SCR.
SA/chrome tape *2	: 30 - 16,000Hz (Nominal)	Input terminals	
	40 - 15,000Hz $\pm$ 3dB (Typical)	Mic jack x 2	: Max. sensitivity; 0.2mV (-72dBs)
SF/Normal tape *3	: 30 - 15,000Hz (Nominal)		Matching impedance;
	40 - 14,000Hz $\pm$ 3dB (Typical)		600 $\Omega$ ~ 10k $\Omega$
(0dB recording)		Input jack x 2	: Min. input level; 55mV (-23dBs)
Metal tape	: 40 - 11,000Hz $\pm$ 3dB		Input impedance; 100k $\Omega$
SA/chrome tape	: 40 - 8,000Hz $\pm$ 3dB	Output terminals	
SF/Normal tape	: 40 - 8,000Hz $\pm$ 3dB	Output jack x 2	: Output level, 300mV
Note: *1	..... SCOTCH METAFINE or Equivalent		Output impedance; 5k $\Omega$
*2	..... TDK SA or Equivalent	Phones jack x 1	: Output level; 0.3mV/8 $\Omega$
*3	..... MAXELL UD or Equivalent		Matching impedance;
S/N ratio	: 58dB (from peak level, weighted, Metal tape)		8 $\Omega$ ~ 1k $\Omega$
	The S/N is improved by 5dB at 1kHz and by 10dB above 5kHz with ANRS on.	DIN socket	: Min. input level ; 0.1mV/k $\Omega$
	(DIN 45 500 weighted)		Input impedance ; 10k $\Omega$
Effect of Super ANRS:			Output level ; 300mV
(Normal tape)	Improvement of S/N: the same as with ANRS	Power requirement	: AC 240V, 50Hz (KD-D3A)
	Improvement of frequency response: 0dB recording; 6dB at 10kHz		AC 240/220/120V, 50/60Hz (KD-D3B/C/E/J)
	+5dB recording; 12dB at 10kHz		AC 240/220/120/100V 50/60Hz (KD-D3U)
	Improvement of distortion: 0dB recording; 3% or less at 10kHz	Power consumption	: 14W
	+5dB recording; 3% or less at 10kHz	Dimensions	: 16½" (420mm)W
			4¼" (110mm)H
			10¼" (261mm)D
Wow and flutter	: 0.05% (WRMS), 0.16% (DIN 45 500)		(with feet, buttons, switches)
Crosstalk	: 65dB (1kHz)	Weight	: 10 lbs (4.5 kg)
Harmonic distortion	: K3; 0.5%, THD; 1.0% (metal tape, 1kHz)		Design and specifications subject to change without notice.

# Features

- \*Soft-touch one motor mechanical logic operation mechanism
- \*Single music scan system
- \*Super ANRS/ANRS noise reduction system
- \*Rewind auto-play

- \*QUE & review facility
- \*Two-color, 7-point L.E.D peak indicator
- \*Metal tape compatible
- METAPERM-R/P head & two-gap ferrite head for erase
- Timer standby facility

## Controls and Connections

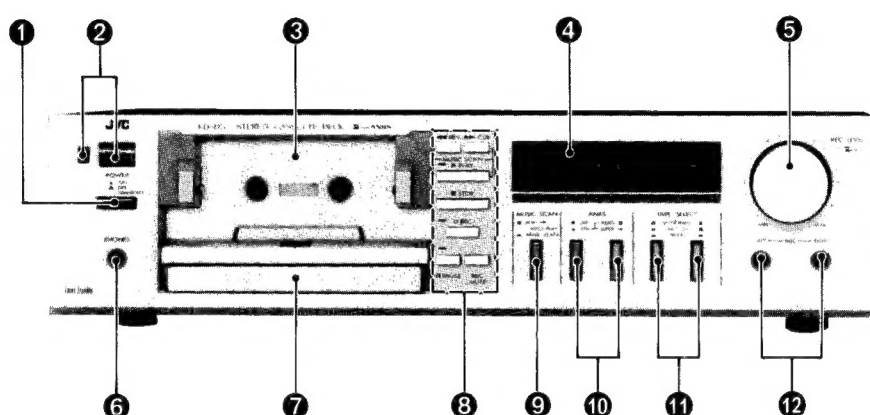


Fig. 1

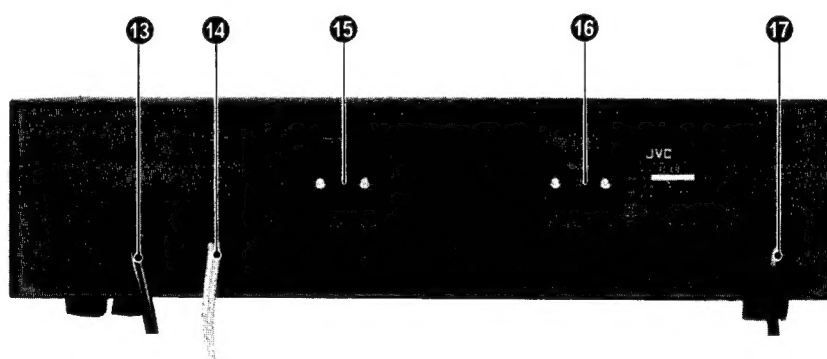


Fig. 2

- |  |  |
|--|--|
| ① POWER switch   | ■ STOP button                          |
| ② Tape counter/counter reset button                          | ○ REC button                           |
| ③ Cassette compartment                                       | ⏸ PAUSE button                         |
| ④ PEAK LEVEL INDICATOR                                       | REC MUTE button                        |
| ⑤ REC LEVEL controls (L — left channel<br>R — right channel) | ⑨ MUSIC SCAN switch                    |
| ⑥ Headphone jack (PHONES)                                    | ⑩ ANRS switch                          |
| ⑦ Head cover   | ⑪ TAPE SELECT switch                   |
| ⑧ Cassette operation buttons                                 | ⑫ Microphone jacks (MIC-, LEFT, RIGHT) |
| ◀◀ REV (Review) button                                       | ⑬ LINE IN cords                        |
| ▶▶ CUE button  | ⑭ LINE OUT cords                       |
| ▶ PLAY button  | ⑮ REC/PB socket (DIN socket)           |
|  | ⑯ Voltage select switch (KD-D3B/E/U)   |
|  | ⑰ Power cord                           |

# Main Parts Location

(Top view)

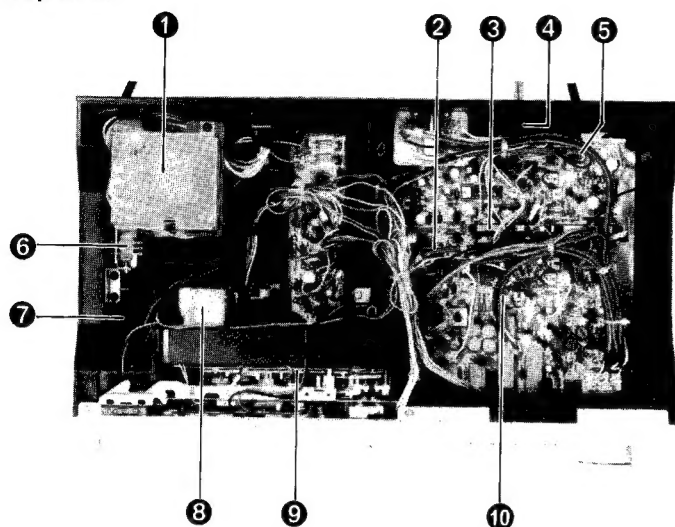


Fig. 3

- ① Power transformer P.W. board assembly
- ② Recording switch bar
- ③ Recording switch
- ④ Line out cord
- ⑤ Line in cord
- ⑥ Power switch
- ⑦ Bar (for power switch)
- ⑧ Motor
- ⑨ Mechanical assembly
- ⑩ Main amp P.W.B. assembly

(Mechanical parts)

- ① Counter assembly
- ② Dual ball
- ③ Dual ball base
- ④ Supply reel assembly
- ⑤ Take up reel assembly
- ⑥ Dual ball
- ⑦ REV (Review) button
- ⑧ CUE button
- ⑨ PLAY button
- ⑩ STOP button
- ⑪ REC button
- ⑫ PAUSE button
- ⑬ Erase head
- ⑭ Rec/PB head
- ⑮ Capstan
- ⑯ Pinch roller arm assembly
- ⑰ Reel disc bracket ass'y
- ⑱ Take-up belt
- ⑲ Motor assembly
- ⑳ Adjustment hole for motor speed
- ㉑ Counter belt
- ㉒ Counter pulley
- ㉓ FM bracket (Flywheel, motor bracket)
- ㉔ Solenoid

(Front view-Mechanical assembly)

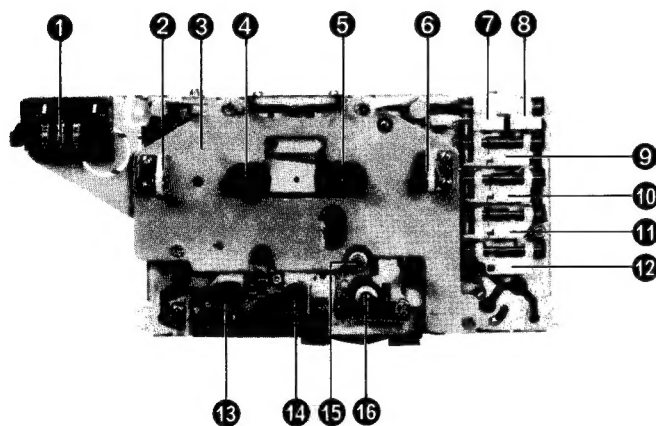


Fig. 4

(Rear view-Mechanical assembly)

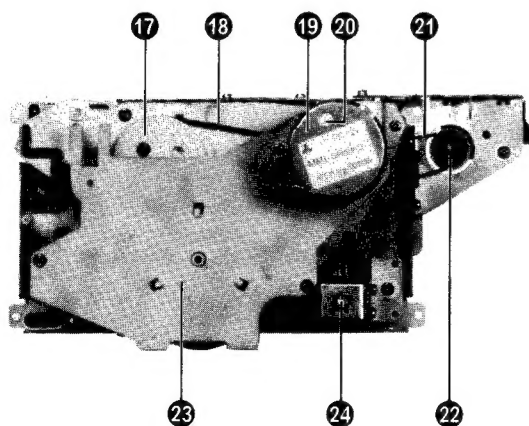


Fig. 5



# Description on New Technology

## Mechanical Logic System

This is a new system in which the mechanism control is activated mechanically even though it has been done electrically in conventional systems.

Basically, power is transmitted from the motor to the flywheel via a belt. The capstan is thereby driven and at the same time, the various operations of PLAY, REC, REW, FF, PAUSE, STOP, etc. are performed through a coaxially mounted gear/cam combination mechanism and a solenoid.

### Fundamental operating principle (Figs 6, 7 and 8)

1. When any mechanism control button is pressed, the lever ass'y pushes the trigger (sheet metal). Thus, the trigger lever disengages the drive gear from the cam.
2. The drive gear rotates a little and engages with the gear coaxially fixed to the flywheel. Thereby, the drive gear further rotates by the torque of the flywheel.
3. The drive base is shifted upward by the eccentric cam coaxially fixed to the drive gear.
4. The drive base is locked at the upper side and the desired operation starts.
5. The drive gear returns to its original position after one rotation and leaves the gear coaxially fixed to the flywheel.
6. The drive gear finishes moving.

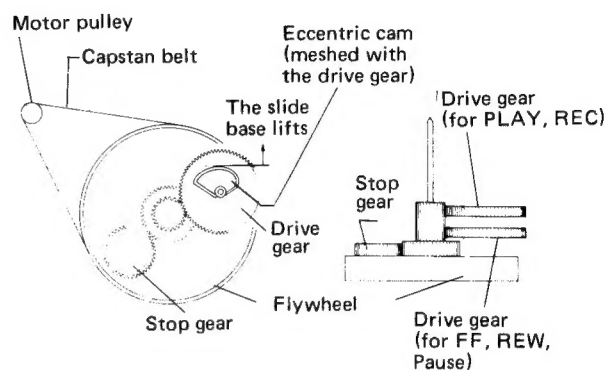


Fig. 6

## Respective Operations

### 1. PLAY operation (Figs 7 and 8)

- 1) When the PLAY button is pressed, point A is pushed up.
- 2) Concurrently, the play trigger is pushed up and point B moves upward.
- 3) The trigger lever moves with point H as the center as points C, D and E each draw a circle.
- 4) The hook at point J is undone.
- 5) The pressure arm is pushed by the torsion spring and moves in the direction of G with point K as the center.
- 6) The drive gear slightly rotates in the direction of F.
- 7) The gear coaxially fixed to the flywheel engages with the drive gear and rotates.
- 8) The drive gear rotates in the direction of L and its fixed cam turns in the direction of M.
- 9) The play drive base is pushed up in the direction of P by the cam.
- 10) Point N is pushed up and the head base comes forward.

**Note:** In the PLAY operation, the lock arm moves in the direction of O and locks the head base to prevent its return when the play drive base has moved in the direction of P. Releasing this lock arm results in the STOP mode.

### 2. REC operation (Figs 7 and 8)

- 1) Press the REC button alone, because of one-touch recording.
- 2) The operating principle is the same as in PLAY operation.
- 3) When the REC button is pressed, record lever Q is pushed and engages with the play drive base because of the motion of the record lever, and pushes up the play drive base with supporting point R as the center. Then, the bar attached to the record lever pushes the record plate and the slide switch is thereby pulled.

**Note:** The REC button cannot be pressed unless the record prevention lever is pressed.

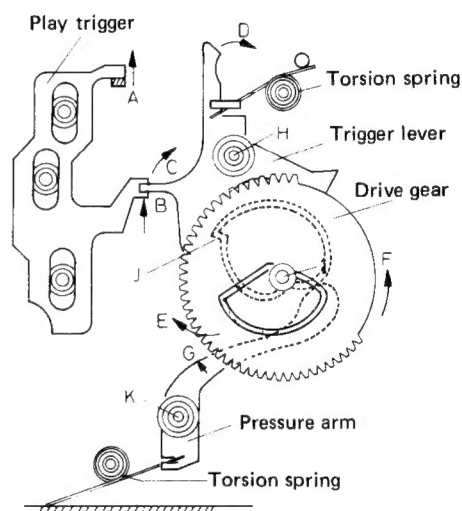


Fig. 7

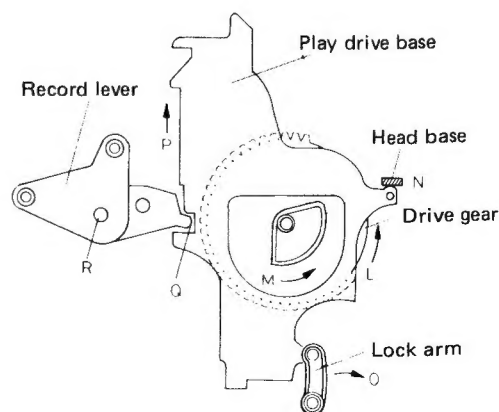


Fig. 8

**3. PAUSE operation (Figs 9 and 10)**

- 1) Press the PAUSE button during playback or recording.
- 2) The pause lever engages with the fast-forward drive lever.
- 3) The drive gear rotates and the fast-forward drive lever is pushed up.
- 4) Pause lever (1) is pushed.

**4. FF or REW operation (Figs 10 and 11)**

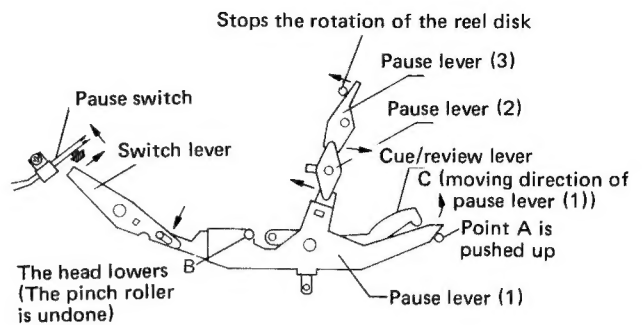
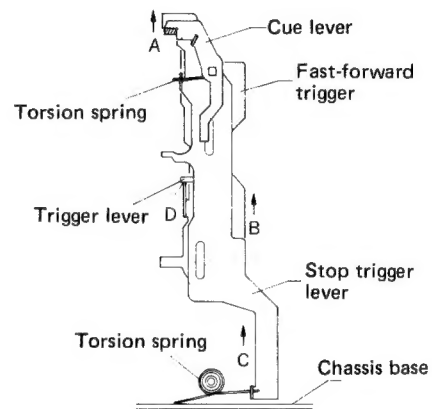
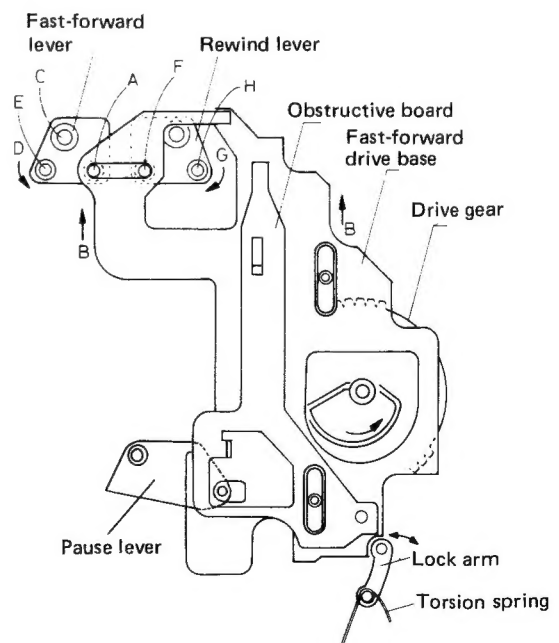
- 1) Press the FF or REW button.
- 2) Point A is pushed upward.
- 3) At the same time, the fast-forward trigger bar is pushed up in the direction of B and the stop trigger bar, in the direction of C.
- 4) The trigger lever at point D is pushed up.
- 5) Same as in PLAY operation, the drive gear is unhooked.
- 6) The fast-forward drive base is pushed up by the eccentric cam of the drive gear.

**5. FF operation (Fig. 11)**

- 1) When the FF button is pressed, the fast-forward lever engages with the elliptic hole of the fast-forward drive base at point A.
- 2) The fast-forward drive base is shifted up by the eccentric cam of the drive gear.
- 3) The fast-forward lever turns in the direction of D with point C as the center.
- 4) The fast-forward drive base is locked with the lock arm and stops as it remains pushed up.
- 5) The fast-forward bar is pushed at point E. There-by, the takeup reel is rotated and the reel disk is released from being braked.
- 6) The fast-forward disk is rotated by the gear attached to the flywheel.

**6. REW operation (Fig. 11)**

- 1) This operation is basically the same as the FF operation.
- 2) The rewind lever engages with the elliptic hole of the fast-forward drive base at point F.
- 3) The rewind lever moves in the direction of G.
- 4) The fast-forward bar is pushed by point H.
- 5) The rewind disk is rotated via the gear attached to the flywheel.

**Fig. 9****Fig. 10****Fig. 11**

# Maintenance

To get long, trouble-free service, maintenance is important. Do not forget cleaning and demagnetizing.

## Cleaning

After long use, the heads and tape part — capstan, pinch roller, etc. — will become dirty with dust or magnetic particles. Dirty heads cause imperfect erasing or high frequency drop-off. A dirty capstan and pinch roller will cause unstable tape speed, leading to increased wow and flutter. Always keep them clean by following the procedure below.

### 1. Heads

Use the head cleaning stick provided to wipe the surface where the tape comes into contact with the head. (It is effective to moisten the cotton with alcohol.)

### 2. Pinch roller and capstan

Do the same method as heads.

### 3. Cabinet

When the cabinet becomes dirty, wipe it with a soft cloth soaked with a neutral cleaning solution of a polishing cloth.

\* Do not use thinner or benzene.

## Demagnetizing

The heads are made from a material resistant to magnetization, but after long use they become magnetized.

A magnet brought into their vicinity can magnetize the heads, causing excess noise. If noise seems to have increased, demagnetize the heads with a head demagnetizer through the following procedure.

1. Turn the POWER switch OFF.
  2. Wrap the tip of the demagnetizer with vinyl tape or soft cloth so as not to damage the head surface. Switch on the demagnetizer and bring it close to the head.
  3. Move the tip of the demagnetizer slowly first to the left and right, then up and down in front of the head. Gradually move it away from the head and switch it off at a distance of more than 30 cm. (12")
  4. The erase head need not be demagnetized. The capstan shaft and tape guide should be demagnetized in the same way as the record/playback head.
- \* Do not bring a magnetized metallic object (a screwdriver, for example) near the head as this will increase noise.

# Removal of the Main Parts

Observe care in handling the parts since the parts are small in size and the distance between them are short due to a deck design aimed mainly at compactness and high performance.

## Enclosure assembly parts

### Top cover

Remove 4 screws fastening the top cover. (left and right ..... 2 screws on each)

### Recording level control knobs

Pull off them forward.

### Bottom cover

Remove 4 screws fastening the bottom cover.

Remove 2 pawls holding the bottom cover rear side.

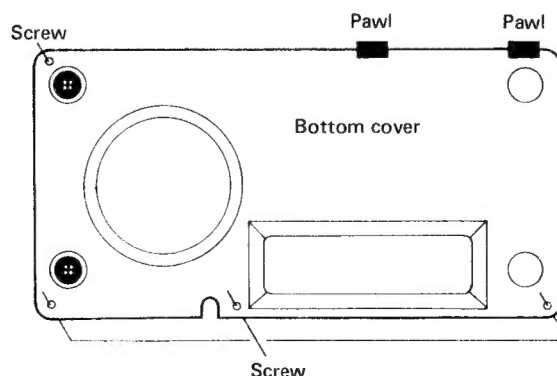
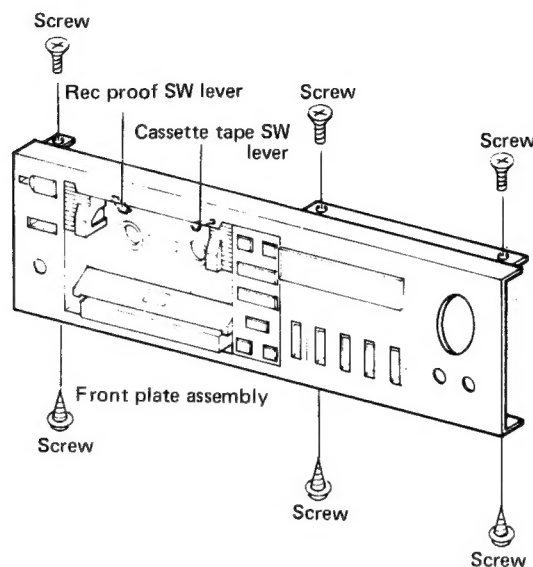


Fig. 12

**Front plate assembly**

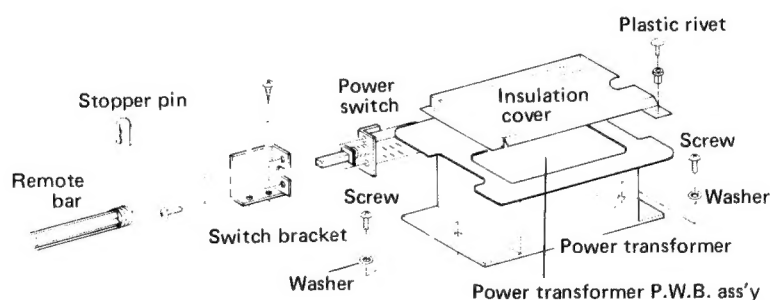
- 1) Remove 6 screws (3 screws on upper side and 3 screws on bottom side) fastening the front plate assembly.
- 2) Remove the front plate ass'y so that the recording proof switch lever (left) and the cassette tape switch lever (right) don't touch the cassette holder.

**Fig. 13****Electrical parts****Power switch**

- 1) Remove the stopper pin holding the remote bar.
- 2) Remove 2 screws fastening the power switch bracket.
- 3) Remove 2 screws fastening the power switch.

**Power transformer**

Remove 2 screws and 2 washers fastening the power transformer.  
Remove plastic rivet fastening the insulation plate.

**Fig. 14****Peak level indicator P.W.B assembly**

- 1) Remove the wire connector ①.
- 2) Push 2 pawls ② (under side) of mould case to upper side, and pull of the indicator assembly to front side.
- 3) Push 2 pawls holding indicator P.W.B ass'y to under direction ③.  
Slide down the indicator P.W.B. ass'y ④.

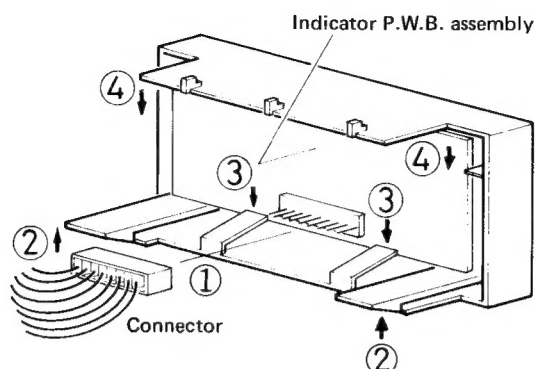


Fig. 15

### Control switch P.W.B. assembly

Remove 2 screws fastening the P.W. board, (when removing the P.W. board, hold the front plate assembly to horizontal as in the figure.)

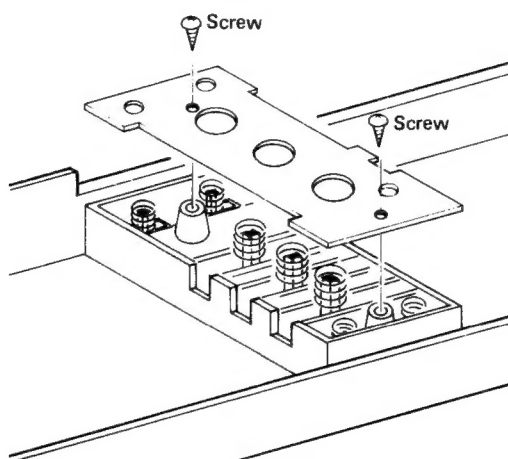


Fig. 16

### Main P.W.B. assembly

- 1) Remove 6 screws fastening the P.W.B. assembly.
- 2) Pull off 5 switch knobs, and remove 2 screws fastening the switches.
- 3) Remove the wire of recording switch from mechanical assembly.

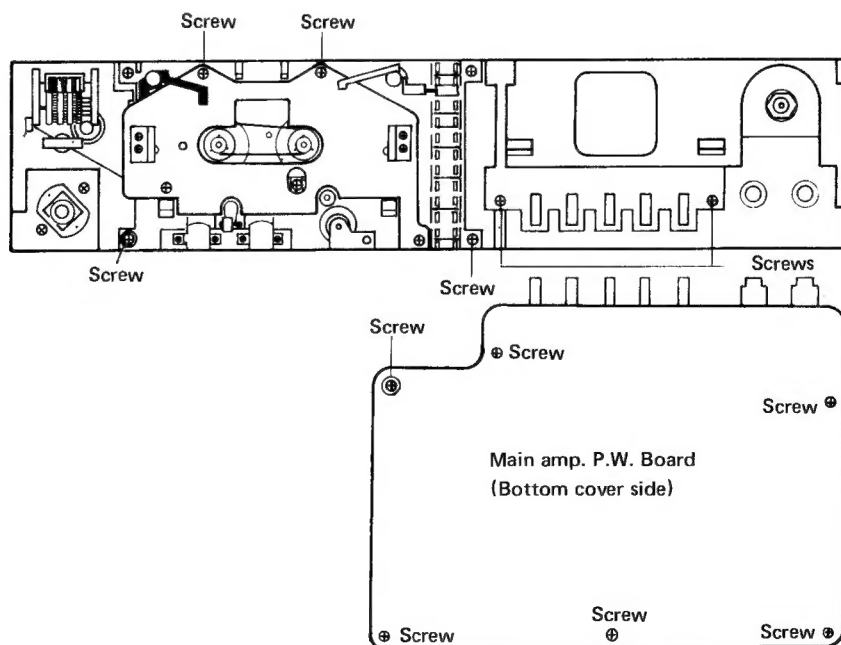


Fig. 17

**Mechanical Assembly**

Remove 4 screws fastening the mechanical assembly.

**Mechanical parts.**

(When removing the mechanical parts, prepare the parts box for no loss the small parts and delicate assembly parts.

Remove should be performed in the order of steps [A], [B], [C] .....

**[A] Duall ball base**

Remove 4 screws (1).

**[B] FM bracket**

- 1) Remove the capstan belt and the reel belt.
- 2) Remove 3 screws (2) (a screw is long size.)

**Motor**

Remove a screw fastening the rubber stopper, and turn the motor in counterclockwise direction.

**Note:** How to hold the belt at removing it hold the reel belt to inner 2 bosses, and the capstan belt to outer 2 bosses, for easy assembly it.

**Flywheel**

Pull off the flywheel to rear side. (when replacing the flywheel, be sure to employ the washer for oil cutting.)

**[C] Reel disc bracket assembly**

- 1) Remove the counter belt and the reel belt.
- 2) Remove 2 screws (4).

**[D] Slide base assembly**

- 1) Remove a spring (5).
- 2) Remove 2 screws (6).

**Pinch roller assembly**

Remove an E-ring.

**REC/PB head**

Remove 2 screws.

(Be careful not to loss a spring for azimuth adjustment.)

**Erase head**

Remove 2 screws.

(Be careful not to loss 2 springs for height adj. and tilt angle adj.)

**[E] Counter**

Remove the counter belt, and then remove a screw (7) fastening the counter.

**[F] Lever return spring**

Remove a screws (8).

**Base guide**

Remove a screws (9).

**Cover**

Remove 2 screws (10)

(Be careful not to loss 3 springs.)

Remove a spring (11)

**[G] Obstructive board.**

Pull off from the cover.

**FF drive base**

Remove a spring (11).

**[H] Removing should be performed in the order of following parts.**

- 1) Drive gear.
- 2) FF lever ass'y, REW lever ass'y.
- 3) FF connecting arm, pause lever ass'y.
- 4) Rec lever ass'y, lock arm ass'y.

**[I] Pressure arm**

Remove a torsion spring and a collar (12).

**Trigger lever**

Remove a torsion spring and a collar (13).

**Play drive base**

Remove from the trigger lever.

**Play lever spring**

Remove a screw (14).

**[J] 1) Drive gear**

Remove the polystyrene washer.

**2) Play lever****3) Trigger lever**

Remove a torsion spring.

**4) Stop trigger lever**

Remove a torsion spring.

**5) Kick lever**

Remove a torsion spring.

**6) Select arm**

Remove a tension spring.

**7) Stop gear**

Remove a special washer (15)

**8) Auto stop lever**

Remove 2 pawls of mold chassis. (left and right)

**9) Pause lock cam**

Remove a lock bush and a spring.

**[K] 1) Trigger bar (B) ) Remove them by driver for presser.****Trigger bar (A)****2) CUE lever**

Remove a spring (16)

**3) Stop trigger**

Remove a torsion spring (17)

**4) FF trigger bar ) Remove****Play trigger bar****[L] Pause button (1 p.c)**

Play button (3 p.c.s)

FF button (2 p.c.s)

Remove each spring, and remove the shaft from 2 pawls (left and right) of mold.

**[M] REC safety lever.****FF safety lever**

Remove each spring, and remove each screw (18) and collar (19).

(When assembly the safety lever, check to move the safety lever self-moved smooth.)

**[N] Release lever**

Remove the lock bush (pressed), and remove the spring.

**Button lock cam**

Remove the torsion spring. (when assembling the button lock cam, be careful to assemble direction.)

**Rec stopper**

Remove the spring, and remove the rec stopper from the shaft on chassis.

**R safety bar ass'y**

Remove a screw (20) and a flange collar (21).

Mechanical Component Parts

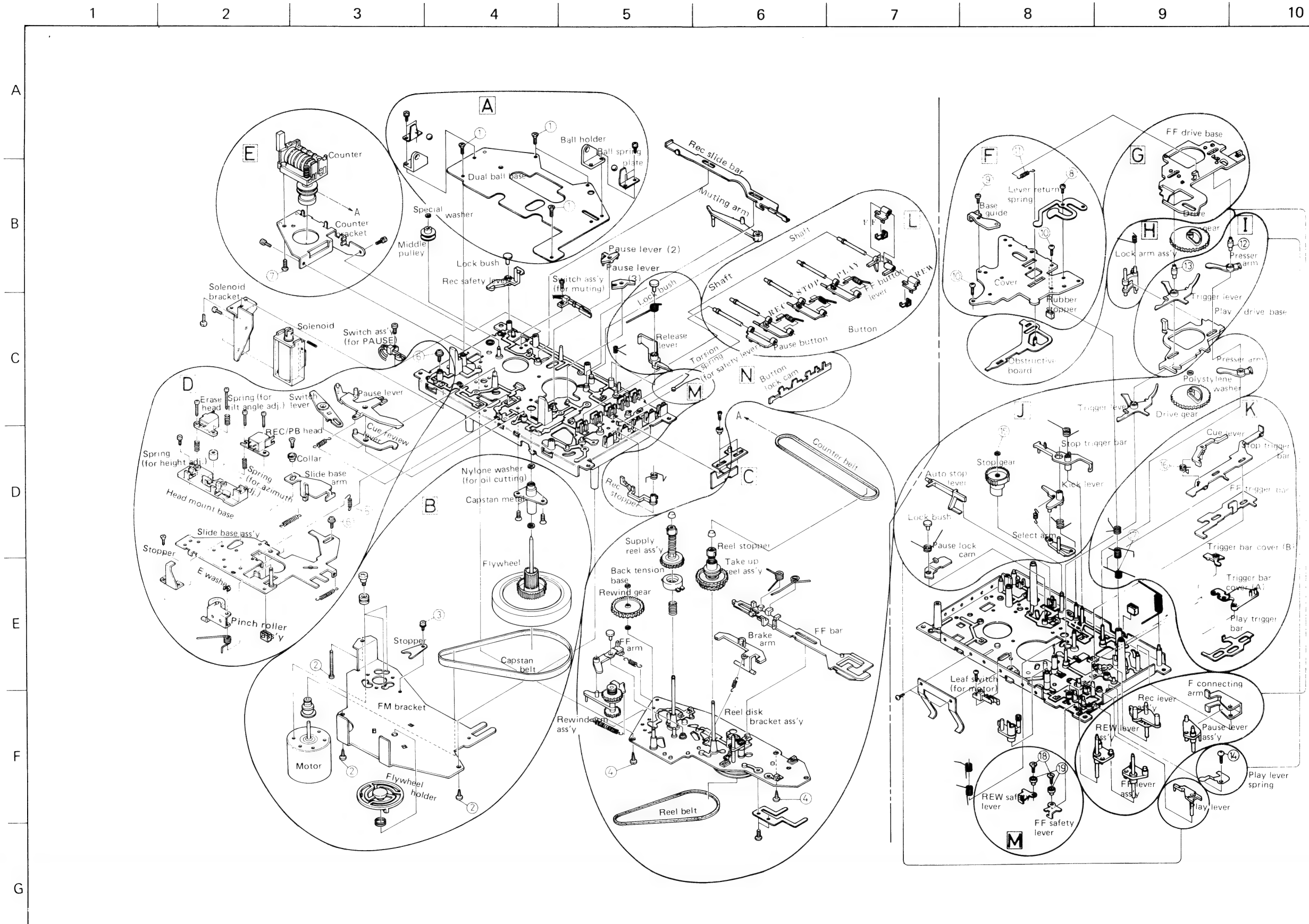


Fig. 18

# Block Diagram

## Recording system

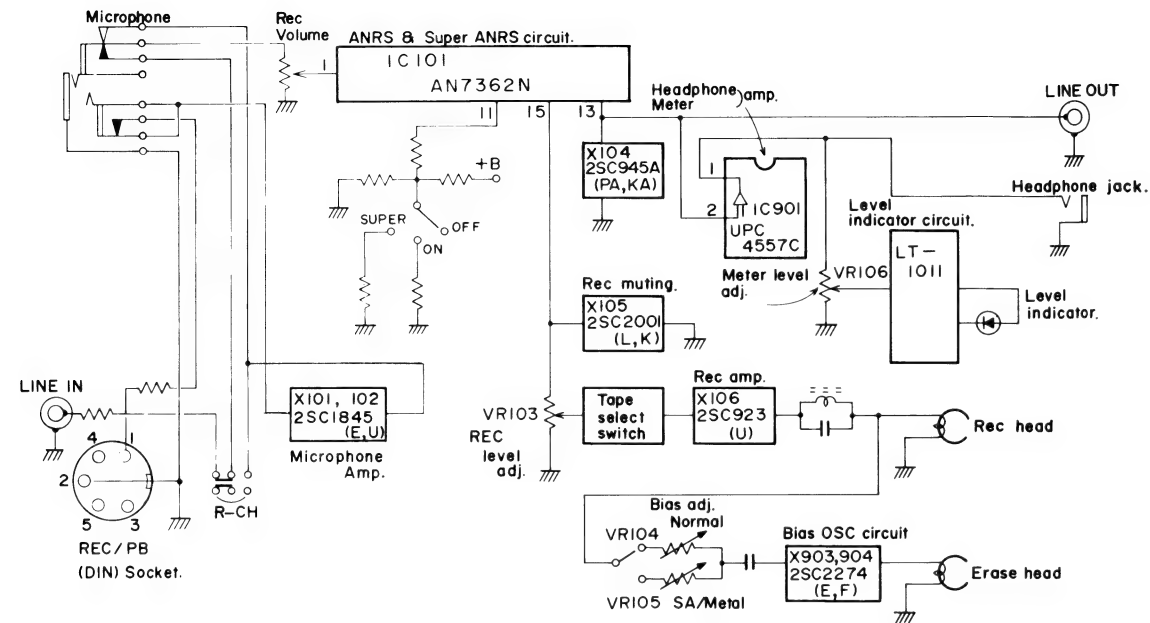


Fig. 19

## Playback system

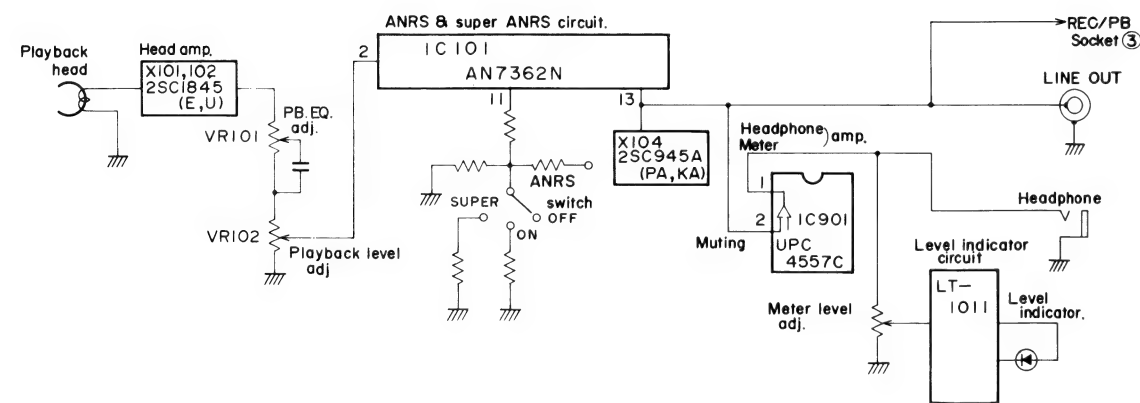
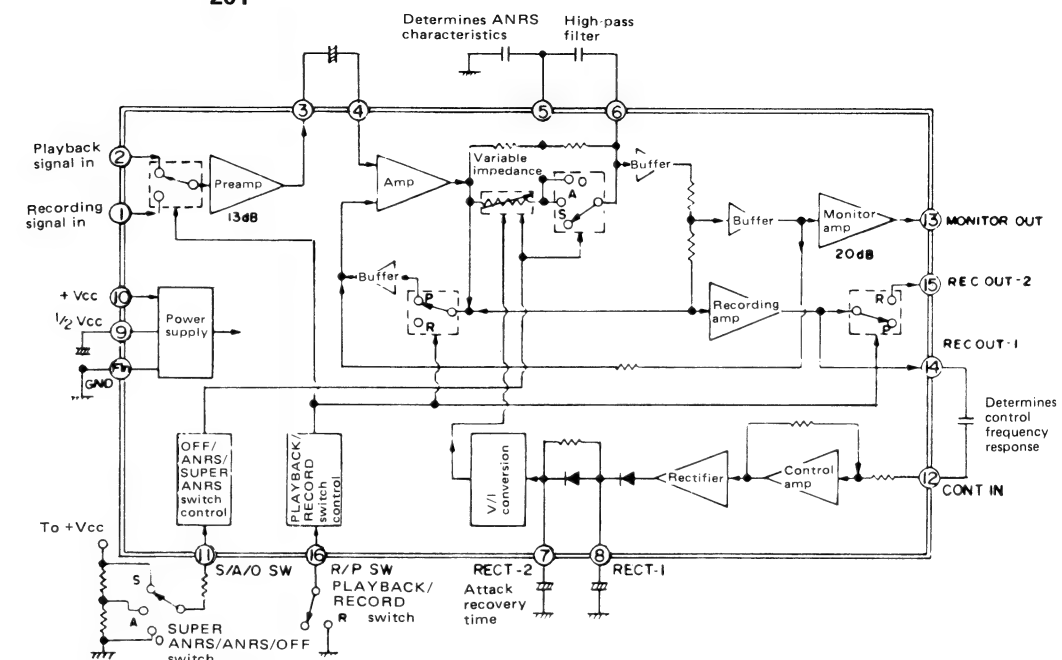


Fig. 20

# Integrand Circuit

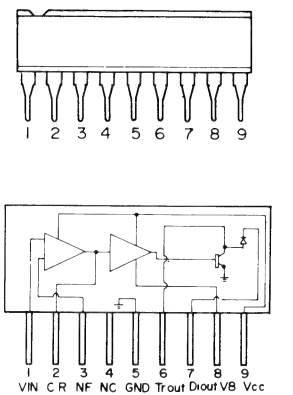
IC101 AN7362N  
201

## Block diagram



IC-902 BA335

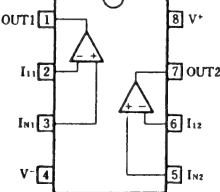
(Side view)



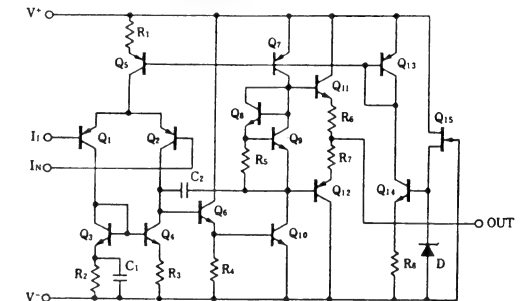
IC901 UPC4557C

## Headphone & meter amp.

(Top view)



## Equivalent circuit (1/2)



LT-1011 LED assembly

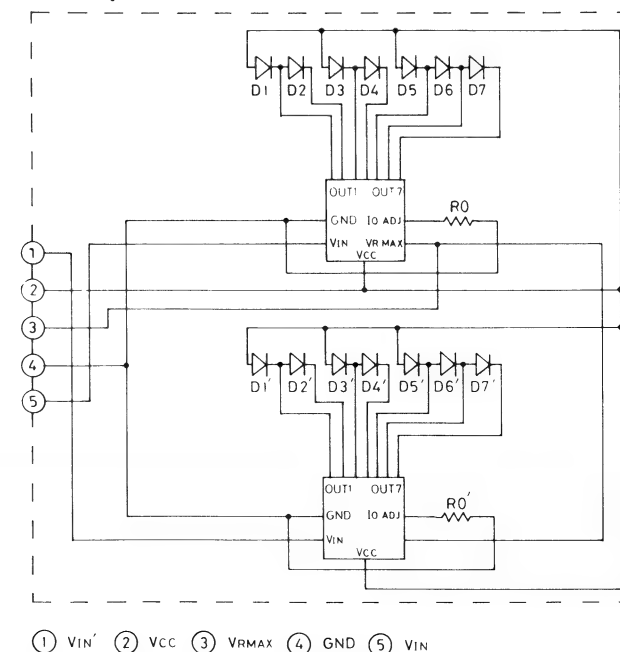
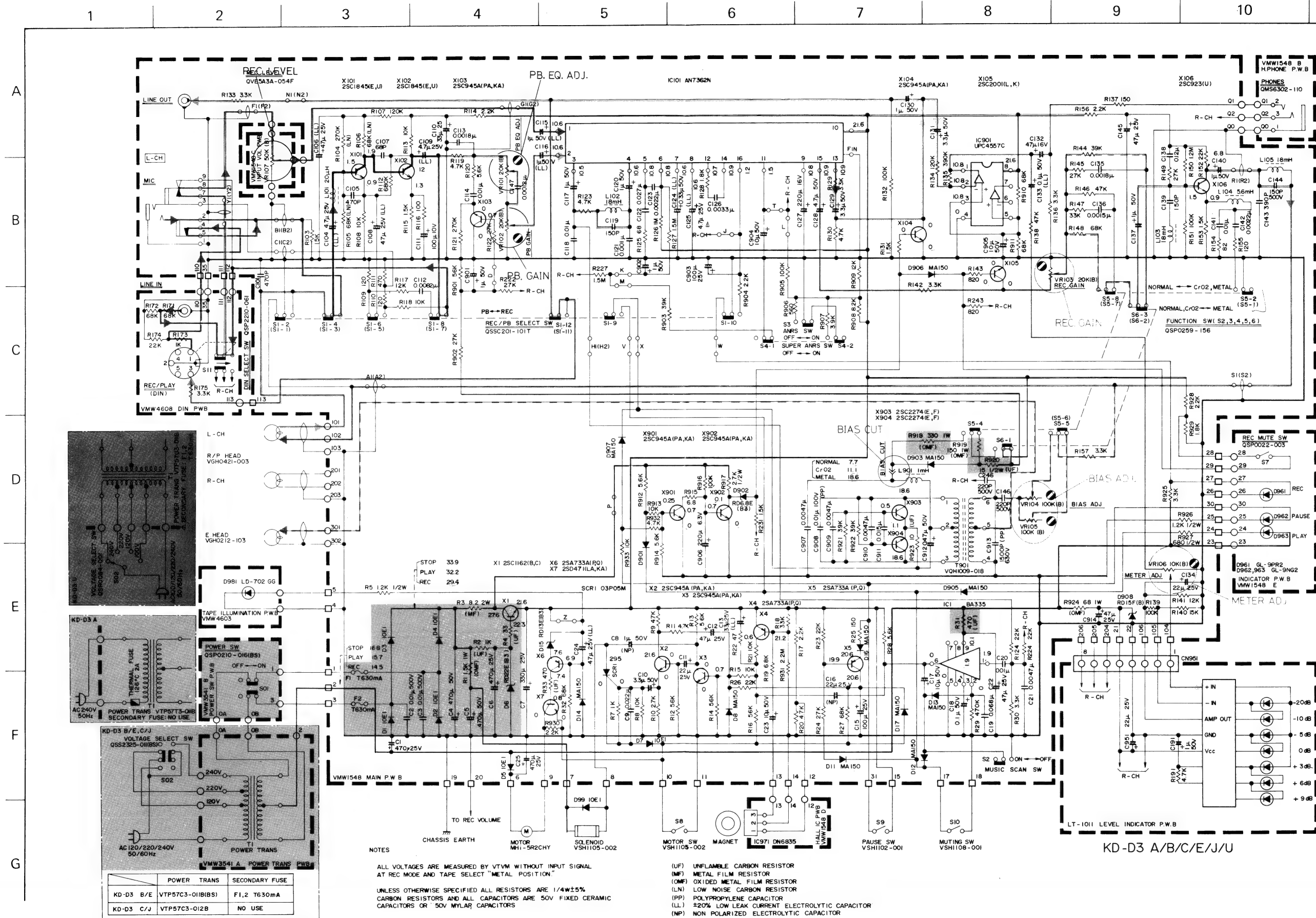


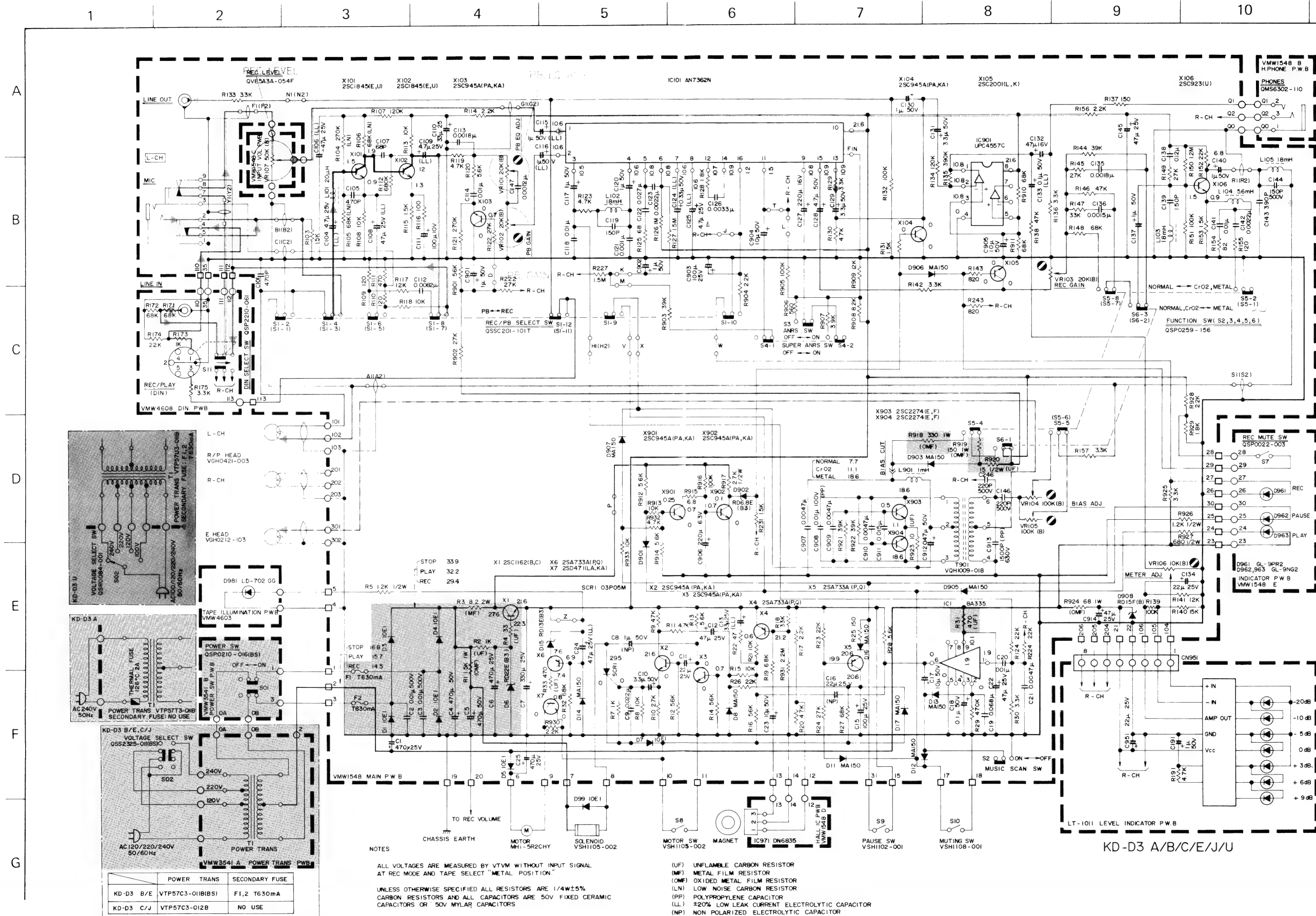
Fig. 21

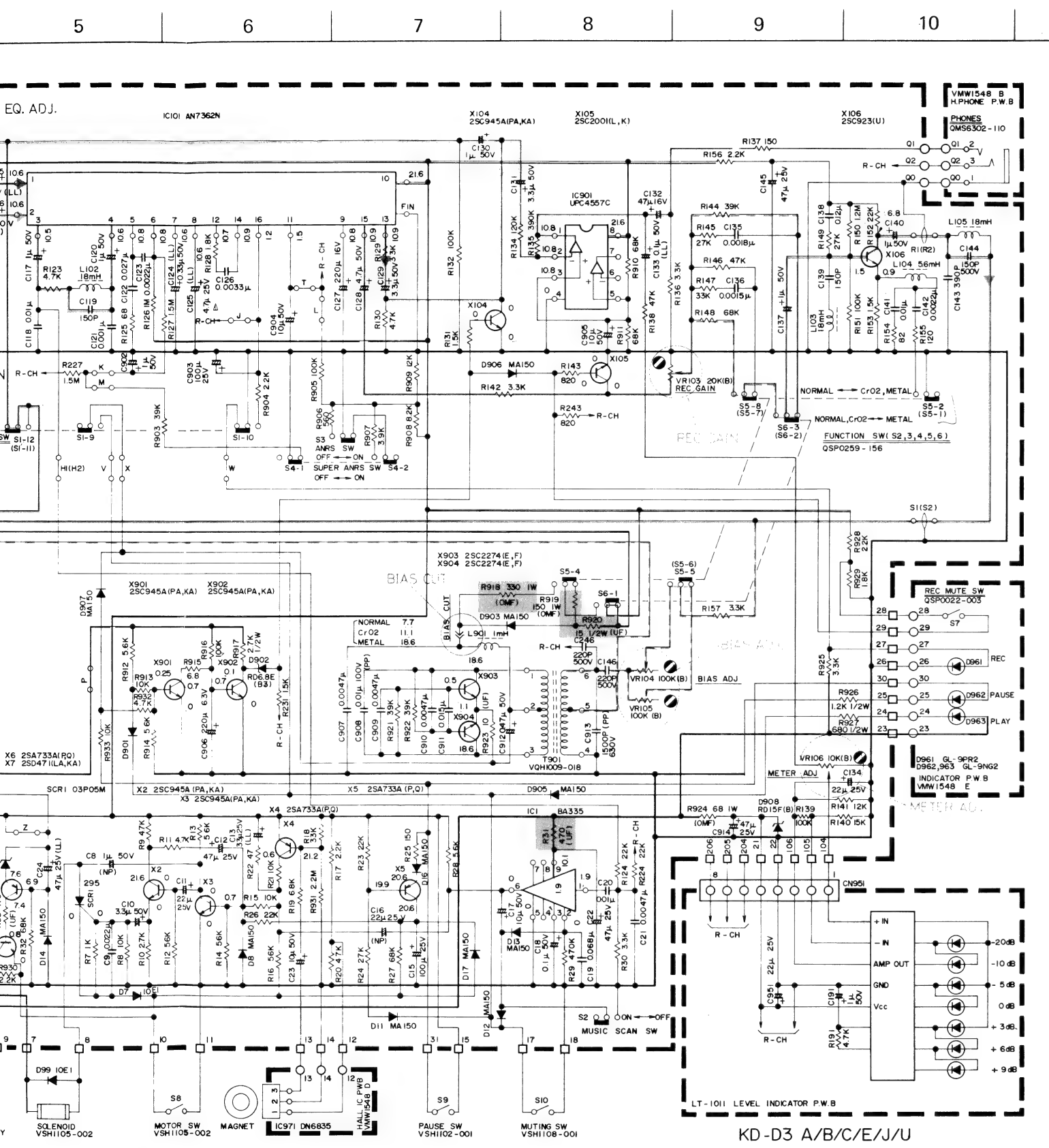


## Standard Schematic Diagram of KD-D3



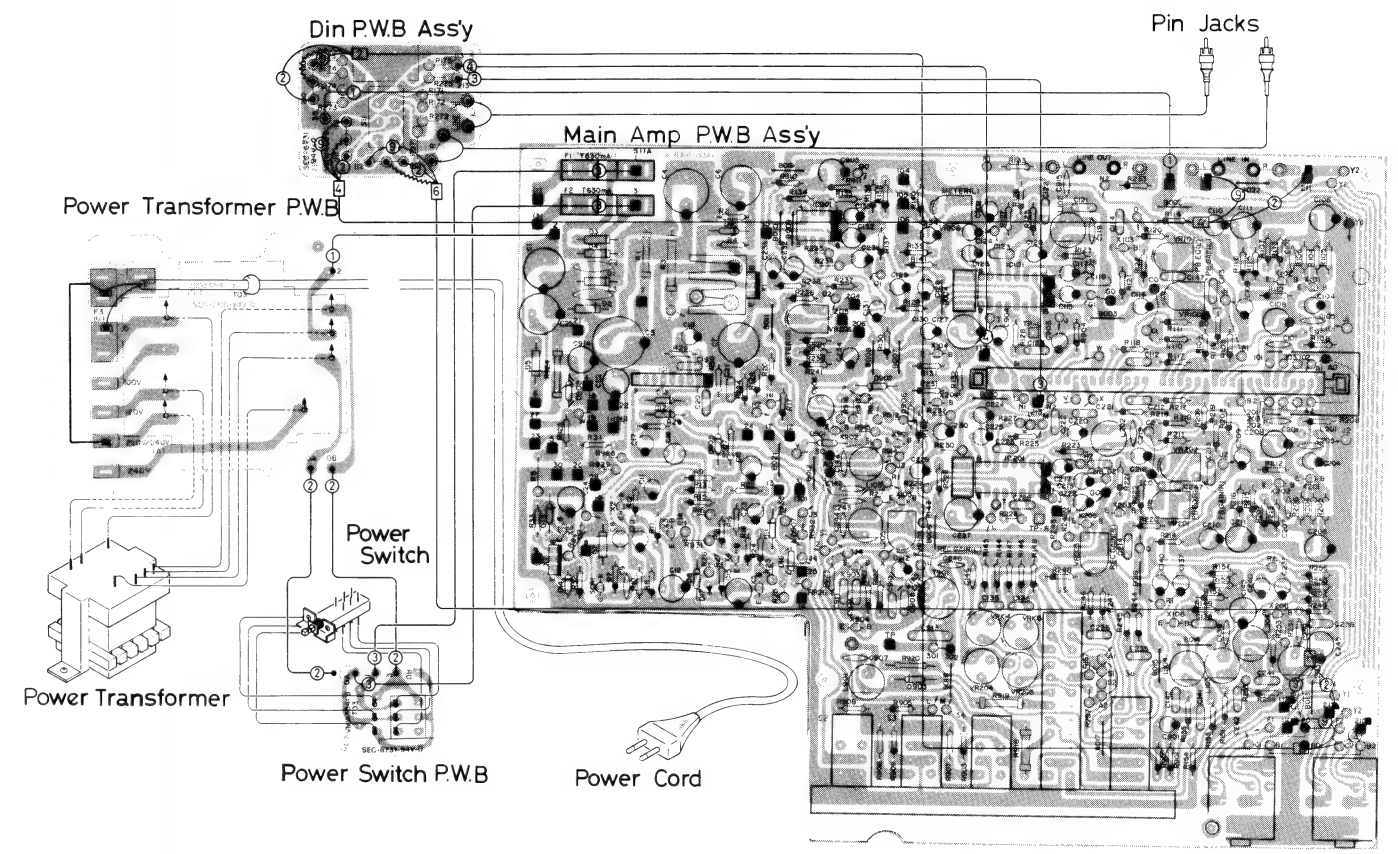
## Standard Schematic Diagram of KD-D3





(UF) UNFLAMMABLE CARBON RESISTOR  
(MF) METAL FILM RESISTOR  
(OMF) OXIDIZED METAL FILM RESISTOR  
(LN) LOW NOISE CARBON RESISTOR  
(PP) POLYPROPYLENE CAPACITOR  
(LL) ±20% LOW LEAK CURRENT ELECTROLYTIC CAPACITOR  
(NP) NON POLARIZED ELECTROLYTIC CAPACITOR

KD-D3A



Color code are shown below.

- |                |                |
|----------------|----------------|
| 1 ..... Brown  | 6 ..... Blue   |
| 2 ..... Red    | 7 ..... Violet |
| 3 ..... Orange | 8 ..... Grey   |
| 4 ..... Yellow | 9 ..... White  |
| 5 ..... Green  | 0 ..... Black  |



# Wiring Connection

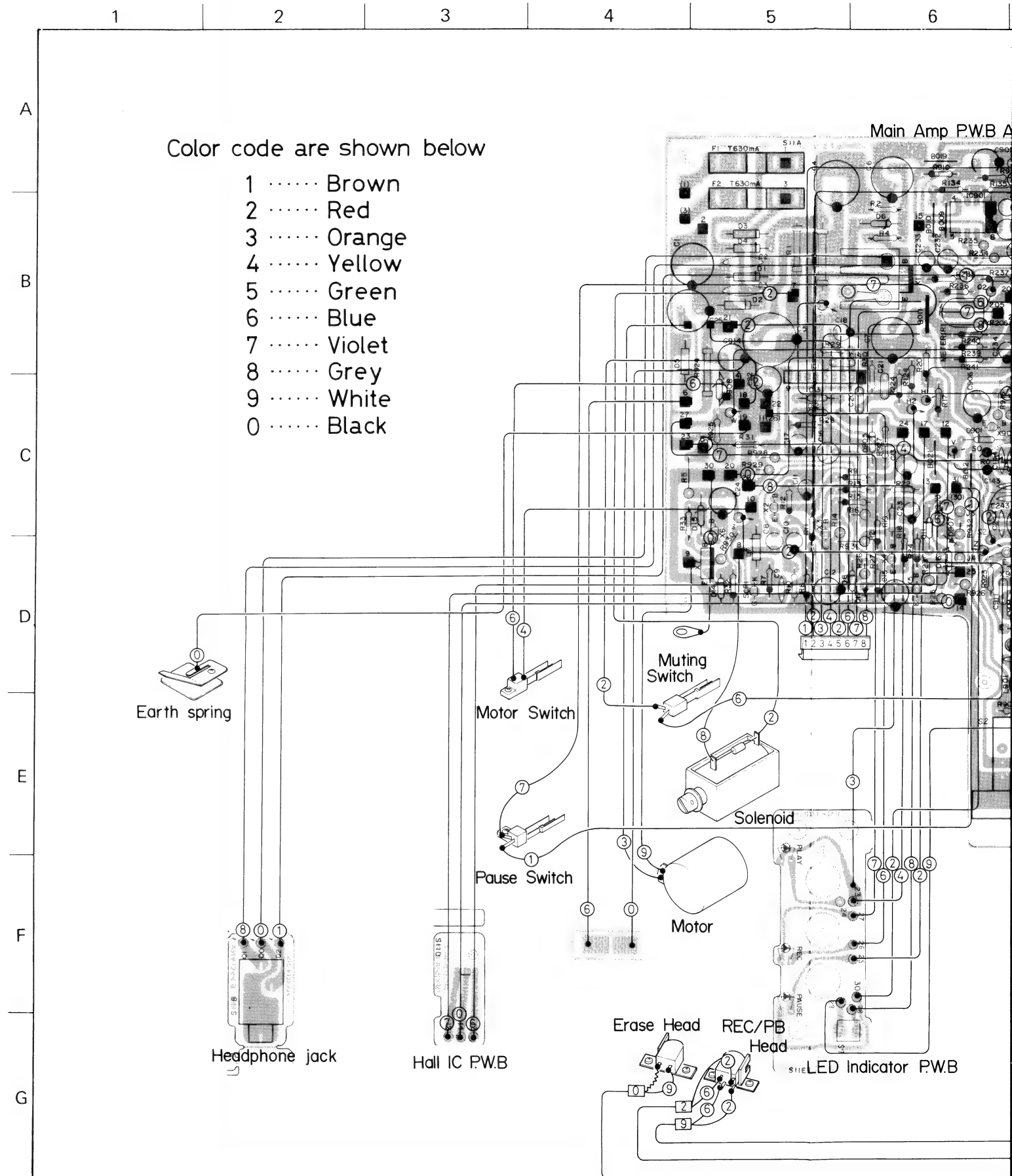
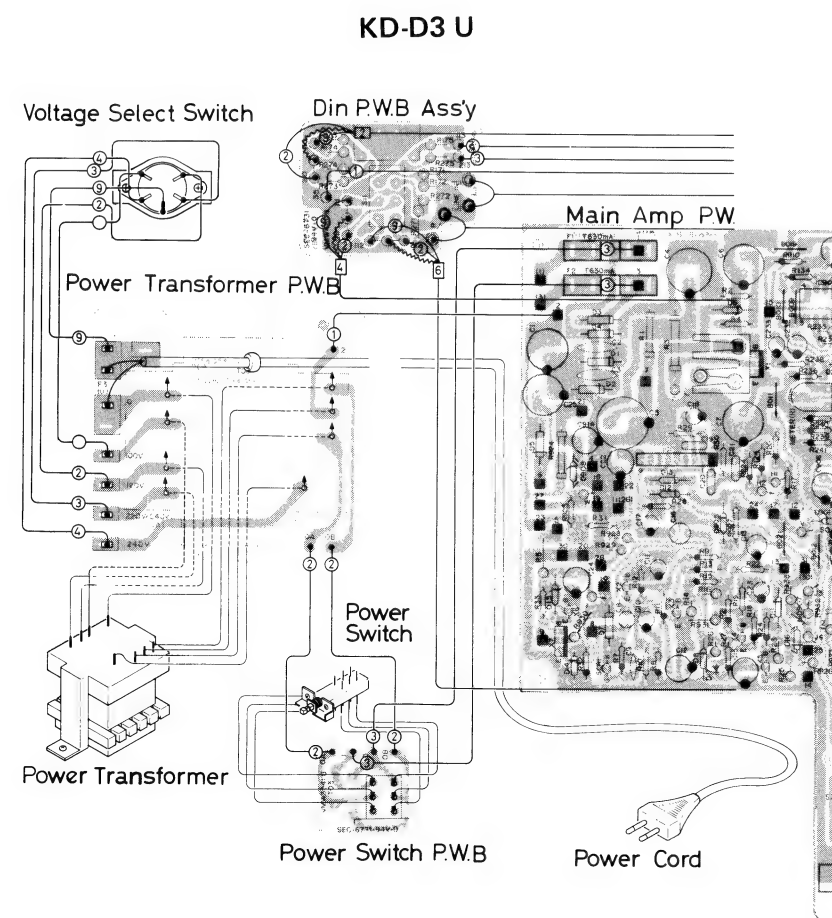
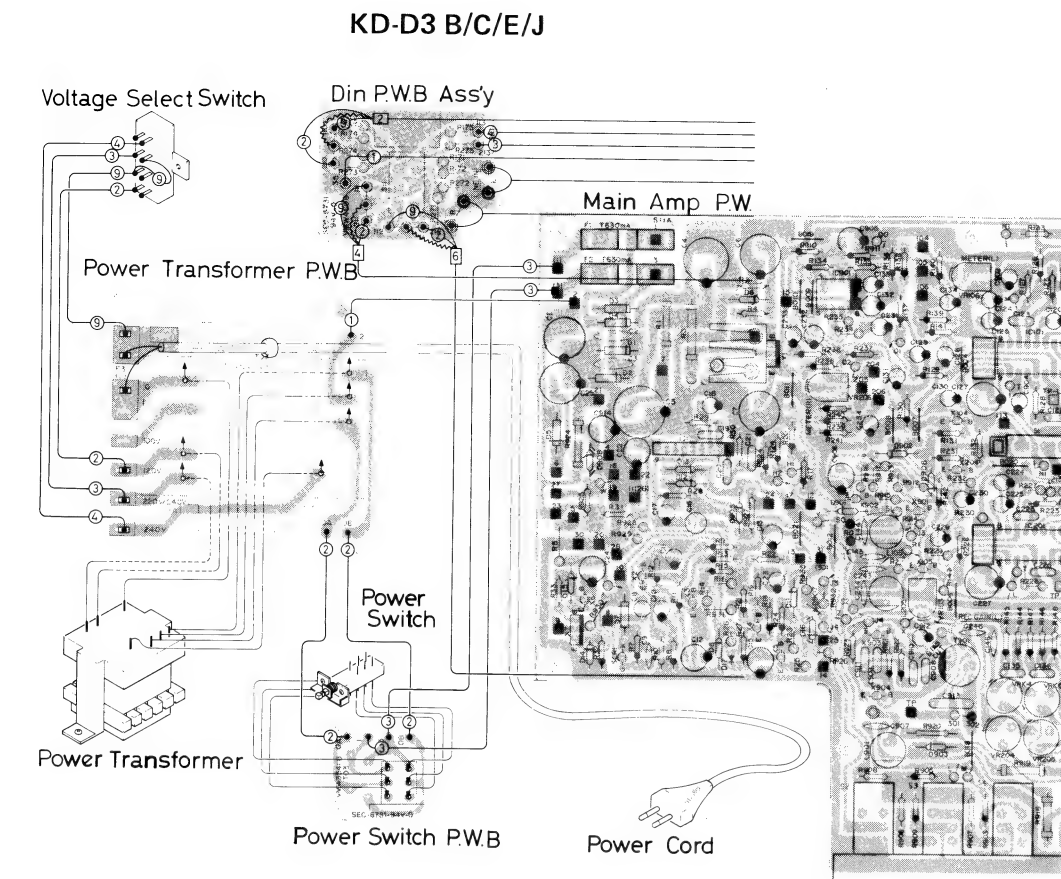


Fig. 23

# Wiring Connection

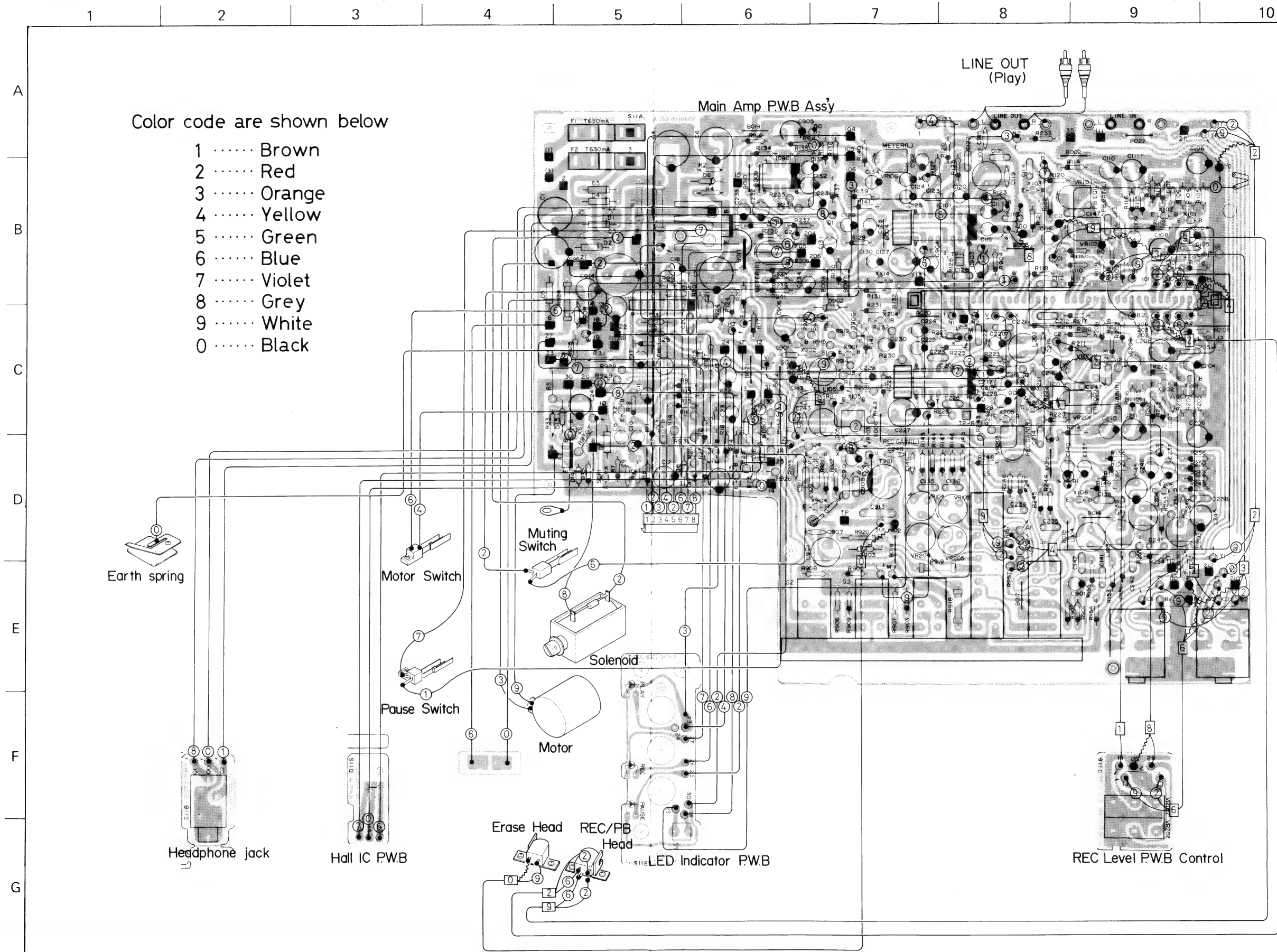


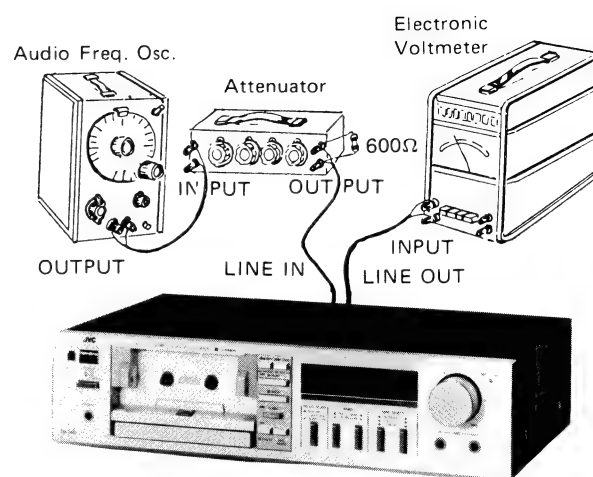
Fig. 23

# Main Adjustments

## [I] Equipment and measuring instruments used for adjustment

### 1. Electrical adjustment

- 1) Electronic voltmeter
- 2) Audio frequency oscillator  
(range: 50–20kHz and output 0dB with impedance 600Ω)
- 3) Attenuator
- 4) Standard tapes for REC/PB  
Maxell UD – SF tape  
TDK SA – SA tape  
SCOTCH METAFINE – Metal tape } or equivalent
- 5) Reference tapes for playback (JVC Test Tape)  
VTT-658 (for head azimuth adj.)  
VTT-656 (for motor speed, wow flutter adj.)  
VTT-664 (for Reference Level 1kHz)  
VTT-675N (for playback frequency response)
- 6) Resistors  
600Ω (for attenuator matching)



KD-D3

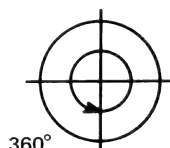
### 2. Mechanical adjustment

- 1) Torque testing cassette gauge
- 2) Blank tape (C-120) for tape running checker.

## [II] Adjustment and repair of the mechanism

### Tape-to-head contact adjustment

- 1) Turn the adjusting screw for aligning the erase head until it stops. Then, turn the screw in the reverse direction by 360° (a 1 revolution).
- 2) Check the tape-to-head contact using a C-120 tape having pads.



- 3) Check it again with a Metal tape.

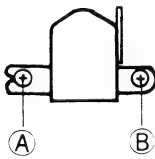
Checking method:

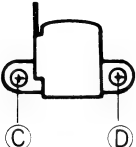
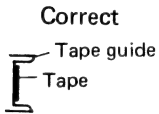

Record a 400Hz or 1kHz signal with 0VU + 20dB.

Erase the recording. Checking if the erasing is satisfactorily performed.

- 4) After adjustment, apply screw bond on the adjusting screw to prevent its loosening.

(Adjust the mechanism or confirm that it is in normal operating condition prior to the adjustment of the electrical circuit.)

Item	Adjustment	Adjusting point	Standard value	Remarks
Adjusting record/playback head position 	<ol style="list-style-type: none"> <li>1. Connect an electronic voltmeter to the LINE OUT terminals.</li> <li>2. Playback the VTT-658 test tape.</li> <li>3. Adjust the head angle with the screw (A) until the reading of the electronic voltmeter becomes maximum for both channels.</li> <li>4. After adjusting, set the screw with screw bond.</li> </ol>	Screw (A)	Maximum	<p>If the head is worn, disconnected or exceedingly magnetized so as not to provide the necessary characteristics, replace it with a new one.</p> <p>After replacement, the head position adjustment as well as the playback level adjustment, the bias current adjustment and the recording level adjustment are all necessary.</p> <p>If the output difference between the left and right channels exceeds 3–4dB, the head is defective.</p> <p>Replace it with a new one.</p>

Item	Adjustment	Adjusting point	Standard value	Remarks
Adjusting erase head height 	Turn the screw ④ for aligning the erase head until it stops. Then, turn the screw in the reverse direction by 180° (a ½ revolution). Employ a special cassette (C-120) from which parts of the casing, where the erase head, record/playback head and capstan engage, has been cut away. Perform tape transport with the cassette tape. Adjust the screw ③ until the tape runs in the center of the erase head tape guide. <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;"> <p>Correct</p>  </div> <div style="text-align: center;"> <p>Incorrect</p>  </div> </div>	Screw ③		Be sure to perform this adjustment after replacing the erase head.
Adjusting motor speed	Connect a speed meter (an electronic counter) to the LINE OUT terminals. Playback the VTT-656 test tape. Adjust the semi-fixed resistor in the motor until the reading of the speed meter is 3000Hz.	Semi-fixed resistor in the motor	3000Hz	If the speed meter functions as a wow and flutter meter, also, connect the deck to the INPUT terminals of the meter.
Checking playback torque	Employ a torque testing cassette tape for the checking.		40—70 gr-cm	If the standard torque is not obtained, replace the take-up disc assembly.
Checking fast forward torque	Measure the torque in the fast forward mode in the same manner as in the above.		More than 80gr-cm	If the standard torque is not obtained, perform the following. 1. Clean the capstan belt, the motor pulley, the take-up reel disc circumference, the flywheel circumference, etc. 2. Replace the belt.
Checking rewind torque	Measure the torque in the rewind mode in the same manner as in the above.		More than 80gr-cm	If the standard torque is not obtained, clean the capstan belt, motor pulley, flywheel circumference, supply reel disc circumference, etc.
Checking wow and flutter	Connect a wow and flutter meter to LINE OUT terminals. Playback the VTT-656A test tape. Check to see if the reading of the meter is within 0.05% (WRMS).			If the reading becomes moving value even if conforming to the standard, a re-claim may be raised. Repairs are necessary.
Checking music scan	1. Set the music scan switch ON, and playback the TMT-6247 test tape. When pushing REV and PLAY buttons or CUE and PLAY buttons, check to do music scan. 2. When playback the TMT-6237, check to no music scan.			
Checking REW→AUTO PLAY	Set the music scan switch OFF with PLAY ~ REW mode. When setting the AUTO STOP mode, check to playback at tape end.			

### [III] Repair of wow flutter

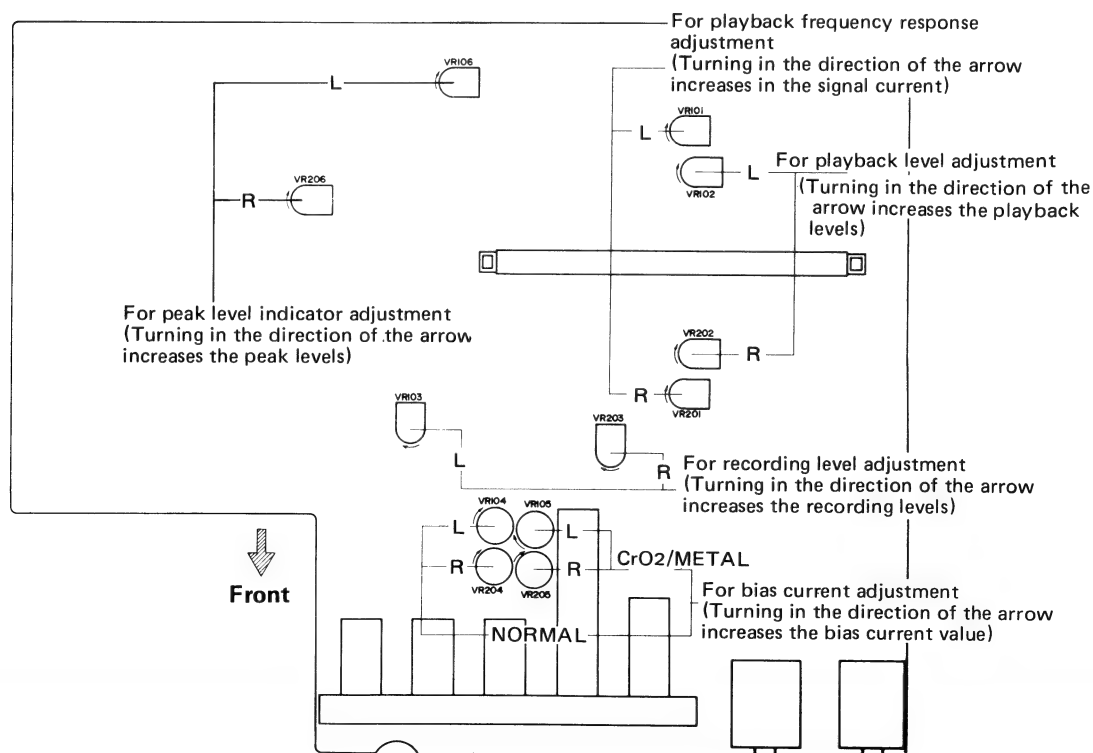
If wow and flutter increase, check the following points.  
If there is defect in revolving parts, the wow and flutter generated will increase in proportion to the number of revolutions.

Play a 3000Hz test tape, and defective part can be detected from the sound.

Section	Trouble	Repair
Capstan and flywheel	Capstan shaft has excessive play. Flywheel turns heavily. (shaft seizure, thrust play, etc.)	Replace flywheel.
Pinch roller	Rough rotation (deformation scratches, or dust) Angular position of the pinch roller. Pinch roller pressure.	Replace pinch roller, or pinch roller spring. Clean the pinch roller.
Belt	Belt has undue run-out. Belt is dirty or slippery.	Clean the belt. Replace the belt.
Back tension	Back tension is irregular, or too strong.	Replace back tension spring (under supply disc).
Motor	Motor shaft has excessive. Motor pulley is oily and dusty.	Replace the motor. Clean the motor pulley.

### [IV] Electrical adjustment location

Main Amp P.W. Board (parts side)

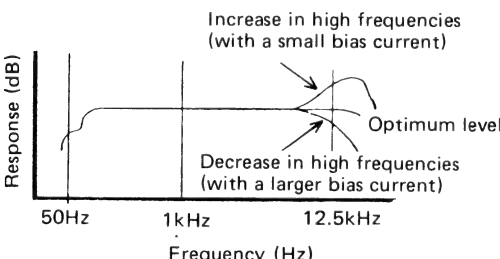




## [V] Electrical circuit adjustment procedure

In the steps marked by an asterisk (\*), adjustment should be performed, however, only checking is sufficient with steps other than those.

Adjustment should be performed in the order of steps 1,2, 3, ... Perform this adjustment with the ANRS switch set to OFF.

Step	Item	Adjustment	Adjusting point	Standard value	Remarks
1*	Adjusting playback level	1. Play back the VTT-664 Reference tape (1kHz) with the tape select switch set to the SF/NORM position. 2. Adjust VR102 and VR202 until the LINE OUT becomes about -8dBs.	VR102, 202	-8dBs (0.3V)	This adjustment becomes necessary when a change in playback level results (for example, due to head replacement).
2*	Playback frequency response	Playback test tape VTT-675N (1kHz, 10kHz) for following adjustment. 1) Adjust VR101 and VR201 so that 10kHz signal and 1kHz signal gains become flat response.	VR101, 201	Reference frequency 1kHz 0±2dB at 10kHz	
3*	Adjusting peak level indicator	1. Set the cassette deck to its recording mode. 2. Apply a 1kHz, approx. -10dBs signal to the LINE IN terminals. 3. Adjust the recording level controls until the signal is available at -8dBs at the LINE OUT terminals. 4. Adjust VR106 and VR206 until the peak level indicator become to 0dB.	VR106, 206	0dB	Perform the adjustment when the parts are replaced.
4*	Checking record/playback frequency response	Record 1kHz, 50Hz and 12.5kHz signals at an input level of 0 VU to -20dB. Playback the tape. Check to see that the 50Hz and 12.5kHz signal output deviations fall within the standard range, using the 1kHz signal output as a reference.	For SF/NORM tape; VR104, 204 For SA/CrO <sub>2</sub> tape; VR105, 205	Reference frequency; 1kHz 0±3dB at 50Hz 0±3dB at 12.5kHz	<p>This checking should be performed for normal and chrome tapes and for both right and left channels.</p> <p>Bias voltage value with metal tape is selected by the voltage sifting of CrO<sub>2</sub> tape adjustment, so that the metal tape need not adjustment.</p> <p>1. Bias current adjustment for a cassette deck should generally be performed referring to the record/playback frequency response. This is because the frequency response of a cassette deck depends more greatly upon the bias current than does that of an open reel deck.</p> <p>The current measuring method described below is an alternative one.</p> <p>2. If the bias current is not properly adjusted, the record and playback characteristics becomes as shown left.</p>
					
5	Adjusting recording level	1. Apply a 1kHz, approx. -10dB Signal to the LINE IN terminals. Adjust the recording level controls until the signal is available at -8dBs at the LINE OUT terminals. 2. After checking to see if the indicator become 0 record the signal applied to both left and right channels using normal tape. 3. Play back the recording part. Perform the recording signal adjustment with VR103 and VR203 so that the indicator become 0.	VR103, 203	0dB	The level difference between left and right channels for SF/NORM tape and chrome tape should be less than 1dB. Perform the adjustment using a normal tape, level difference between recording and playback for SA/CrO <sub>2</sub> and metal tapes, should be less than 1.5dB, and that between left and right channels should also be less than 1dB.

Step	Item	Adjustment	Adjusting point	Standard value	Remarks
6	Checking record/playback distortion	1. Record a 1kHz, -8dBs signal to LINE IN terminals and perform recording with the peak level indicator becomes to 0dB. 2. Play back the recorded part. Check the output with a distortion meter to see if the value conforms to the standard value.		SF/NORM tape; Less than 2.5% SA/CrO <sub>2</sub> tape; Less than 3% Metal tape; Less than 2%	Be sure to perform this adjustment following bias current and recording level adjustments.
7	Checking signal to noise ratio in recording/playback	1. Record a 1kHz, 0dB signal. Stop the input by disconnecting from the terminal to perform non-signal recording. 2. Playback the recorded part. Measure the 0dB recording output and the non-signal recording output for comparison using an electronic voltmeter. Check to see if the value conforms to the standard value.		SF/NORM, SA/CrO <sub>2</sub> and Metal tapes; More than 42dB	Apply an output (-72dBs) to the MIC terminals with the recording level controls set to maximum so that the peak level indicator become 0dB.
8	Checking erasing coefficient	1. Apply a 1kHz signal to the LINE IN terminals. Adjust the recording level controls until the peak level indicator become 0dB. 2. Perform recording with the signal enhanced by 20dB. 3. Erase a part of the recording. 4. Measure the output difference between the erased part and non-erased part to compare with an electronic voltmeter.		More than 65dB	For the measuring, connect a band pass filter between the deck and the electronic voltmeter. <div style="text-align: center;"> <pre> graph LR     Input["Input (1kHz 0VU + 20dB)"] --&gt; TapeDeck["Tape deck (recording, erasing)"]     TapeDeck --&gt; BPF["Band pass filter (1kHz)"]     BPF --&gt; Voltmeter["Electronic voltmeter"]           </pre> </div>
9	Checking Auto stop	Hold less than $1 \pm 0.5$ mm gap to the magnet from the hall IC.			

## Enclosure Assembly and Electrical Parts List

(Except P.W. Board Parts)

△ parts are safety assurance parts.

When replacing those parts, make sure to use the specified one.

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
1	VKS3133-001	LED Holder		1
2	VJD4465-002	LED Plate		1
3	VXP4120-001	Push Button	Function Power	5
4	VXP4101-002	"		1
5	VKS4148-001	Remote Bar		1
6	VYTS404-001	Lock Plate		1
7	VJC1145-003	Front Plate		1
8	VJD2167-001	Mecha Cover		1
9	LD-702	LED		1
10	VJD3254-001	Mecha Plate		1
11	VXP4109-002	Push Button	Rec	1
12	VXP4102-002	" (L)	Mecha (Large)	2
13	VXP4103-002	" (S)	Mecha (Small)	3
14	VXP4104-002	"	Rec. Mute	1
15	VMW4603-001	P.W.Board	LED	1
16	VJK4134-001	Finder		1
17	VJK4120-01	Counter Lens		1
18	VJD4466-001	Escutcheon		1
19	VXL4138-00A	Knob Ass'y (L)	Input	1

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
20	VXL4139-00A	Knob Ass'y (R)	Input	1
21	VJD3255-002	Head Cover	"	1
22	VJD4467-001	Head Cover Plate		1
23	VJD4009-001	Head Mark		1
24	VJD3256-002	Dust Cover		1
25	VJD4468-001	Dust Cover Plate		1
26	VJF4003-001	Foot		2
27	VJC2037-001	Bottom Cover		1
28	OZF2210-002	Foot		2
29	VND4039-002	Jack Label		1
30	VJC1146-002	Top Cover		1
31	VYN2077-003LA	Name Plate	KD-D3A	1
	" -002LA	"	KD-D3B	1
	" -004LA	"	KD-D3C	1
	" -005LA	"	KD-D3E	1
	" -006LA	"	KD-D3J	1
	" -007LA	"	KD-D3U	1
33	TJN265559-04	Silencer		1
34	VYH1119-002UL	Chassis	KD-D3J	1
	" -003	"	KD-D3A/B/C/E/U	
36	△ VTP57T3-011B	Power Transformer	KD-D3A	1
	△ VTP57C3-011BS	"	KD-D3B	1
	△ " -012B	"	KD-D3C,J	1
	△ " -011B	"	KD-D3E	1
	△ VTP57U3-011B	"	KD-D3U	1
37	F4932-002	Special Washer		2
38	△ QMP2560-200	Power Cord	KD-D3A	1
	△ QMP9017-008BS	"	KD-D3B	1
	△ QMP1200-200	"	KD-D3C/J	1
	△ QMP3900-200	"	KD-D3E	1
	△ QMP7600-200	"	KD-D3U	1
39	△ QHS3876-252	Strain Relief	KD-D3A,E	1
	△ " -252BS	"	KD-D3B	1
	△ QHS3056-252	"	KD-D3C/J/U	1
40-1	VMP0011-001	Pin Cord	KD-D3A/B/C/E/U (Black)	1
	VMP0015-001	"	KD-D3J (Black)	1
40-2	VMP0011-002	"	KD-D3A/B/C/E/U (Gray)	1
	VMP0015-002	"	KD-D3J (Gray)	1
41	QHS3876-252	Strain Relief		2
42	VKZ4001-010	Wire Holder		1
43	VKY4202-001	Earth Spring	for Top Cover	1
44	VKL4908-001	Phone Bracket		1
45	VYH4017-001	Stud		2
46	VMA4118-002	Protector		1
47	E48729-002	Plastic Rivet		1
48	VKL4950-001	Power Bracket		1
49	VKY4125-002	Earth spring		1
50	VKL3273-001	Rec Arm		1
51	VKW4251-002	Rec Spring		1
52	VKH4305-001	Shaft		1
53	VYSA1R8-052	Spacer	Bottom	2
54	VYSR101-011	"		2
55	VYSA1R8-047	"	Bottom	2

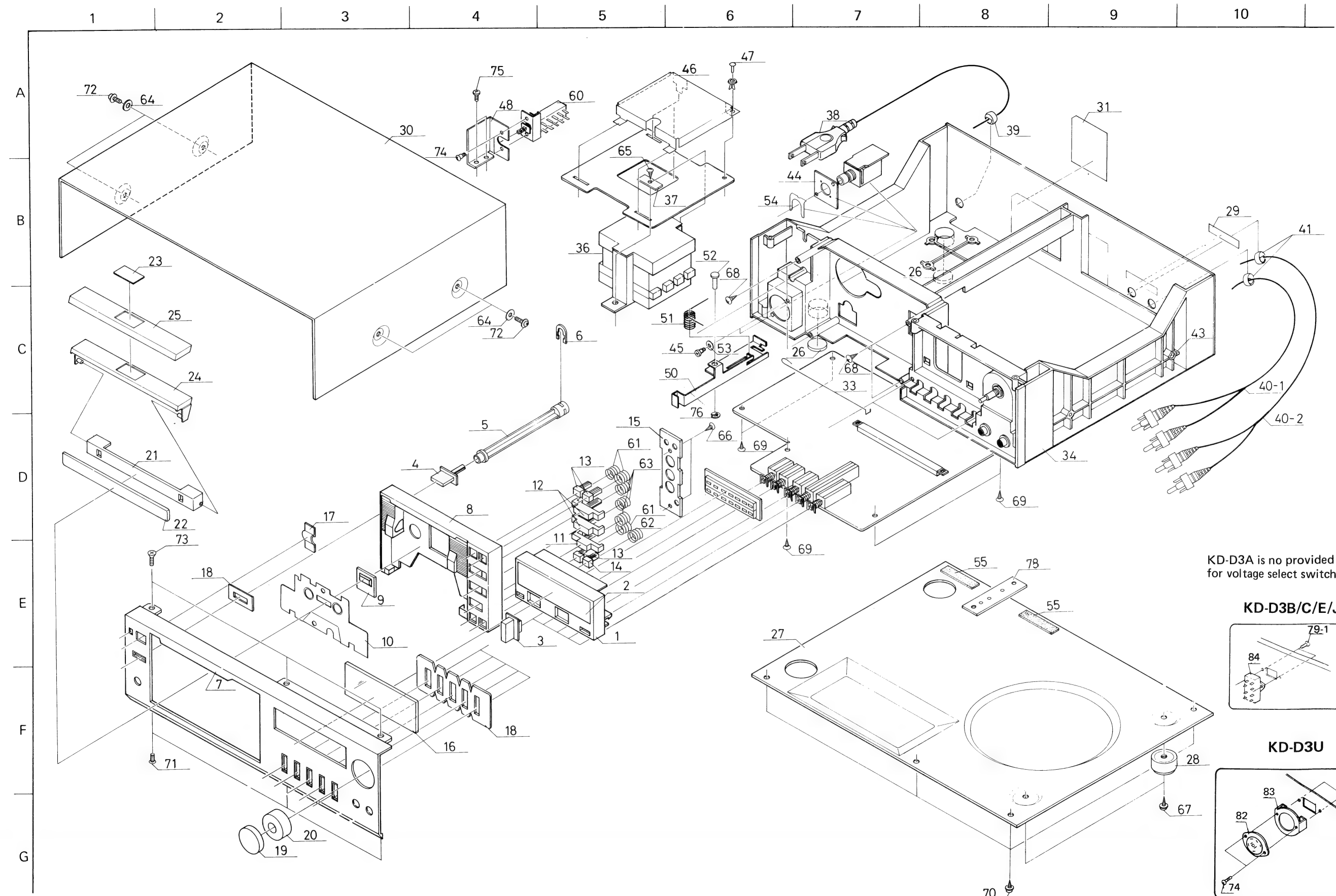
Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
56	VND4015-002	Din Label		1
57	VNC0405-003	Caution Sheet		1
58	QHX2075-001	Wire Clamp		3
59	NTB3000S	Nut		2
60	QSP2101-001	Push Switch	KD-D3J only	1
	QSP0210-016BS	Push Switch	KD-D3B	1
	QSP0210-016	Push Switch	KD-D3A/C/E/J	1
61	VKW3001-031	Compression Spring		3
62	" -049	"		1
63	VKW4248-002	"		3
64	Q03093-502	Washer		4
65	DPSP4014ZS	Screw	for Power Transformer	2
66	SBSF2608Z	"	for LED P.W.B	2
67	SBSB3008Z	"	Foot	2
68	SBSF3010C	"	Mecha	4
69	SBSB3012V	"		6
70	SDSB3008Z	"	Bottom	4
71	SDSF3010Z	"	Front Plate	3
72			Blank No.	
73	SSSF3012Z	"	Front Plate	3
74	LPSP3006ZS	"	Slide Sw (KD-D3U) x 2	4
			Power Bracket x 2	
75	SBSB3010Z	"	Power Bracket x 2	3
			Earth Spring x 1	
76	REE3000	E Ring		1
77	LPSP2605Z	Screw		1
78	VKL4949-001	Trans Bracket		1
79-1	SDSP3010RS	Screw	KD-D3A/B/C/E/J	2
79-2	SDSP3006RS	"	KD-D3U	2
80	SDSP3008RS	"		2
81	LPSP3008VS	"		2
82	QSR0084-001	Voltage Select Sw	KD-D3U	1
83	VKL4275-001	Bracket	KD-D3U	1
84	QSS2325-011BS	Slide Switch	for Voltage Select	1
	" -011	"	KD-D3B	
			KD-D3A/C/E/J	1

## Mechanical Component Parts List

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
1	VKL1195-00A	Chassis Base Sub Ass'y		1
2	VKF4109-00A	Capstan Metal Ass'y		1
3	VKL4884-001	Play Trigger Bar		1
4	VKL4885-001	FF Trigger Bar		1
5	VKL4924-001	Stop Trigger Bar		1
6	VKS4278-001	Cue Lever		1
7	VKS3135-001	Trigger Bar Cover		1
8	VKS4321-001	Trigger Bar Cover (B)		1
9	VKL4935-001	FF Safety Lever		1
10	VKL4936-001	Rew Safety Lever		1
11	VKH3013-002	Flange collar		2
12	VKS4281-00A	Rew Lever Ass'y		1

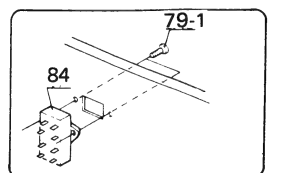
Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
13	VKS4283-00A	FF Lever Ass'y		1
14	VKY4206-001	Play Lever Spring		1
15	VKS4285-001	Play Lever		1
16	VKS4286-00A	Rec Lever Ass'y		1
17	VKS4288-00A	Pause Lever Ass'y		1
18	VKS4290-001	Trigger Lever		2
19	VKR3101-001	Drive Gear		2
20	VKS3129-001	Play Drive Base		1
21	VKS3130-001	FF Drive Base		1
22	VKH4303-001	Collar		2
23	VKL3281-001	Obstructive Board		1
24	VKS4291-001	Pressure Arm		2
25	VKL4917-001	FF Connecting Arm		1
26	VKL3282-001	Cover		1
27	VKL4933-001	Base Guide		1
28	VKY4205-001	Lever Return Spring		1
29	VKS4292-00A	Lock Arm Ass'y		1
30	VKR4193-001	Stop Gear		1
31	This DWG	Special Washer		1
32	VKS4294-001	Kick Lever		1
33	VKS4295-001	Select Arm		1
34	VKS4296-001	Stop Trigger Lever		1
35	VKL4972-00A	R Safety Bar Ass'y		1
36	VKH3013-003	Flange Collar		2
39	VKS4297-001	FF Button Lever		1
40	VKS4298-001	FF Button		2
41	VKY4207-001	FF Spring Plate		2
42	VKH3012-007	Shaft		5
43	VKS4299-001	Play Button		3
44	VKS4300-001	Pause Button		1
45	VKS4340-001	Button Lock Cam		1
46	VKS4317-001	Rec Stopper		1
47	VKZ4146-001	Rubber Stopper		2
48	VKS4303-001	Pause Lock Cam		1
49	VKS4350-001	Lock Bush		1
50	VKS4302-001	Release Lever		1
51	VKS4350-001	Lock Bush		1
52	VKL2131-00A	Reel Disk BKT Ass'y		1
53	VKR4196-00A	Reel Ass'y		1
54	VKR4208-00A	Reel Ass'y		1
55	VKS4247-001	Back Tension Base		1
56	VKR4160-001	Reel Stopper		2
57	VKS3131-002	FF Bar		1
58	VKS3132-001	Brake Arm		1
59	VKS4306-001	FF Arm		1
60	VKS4350-001	Lock Bush		2
61	VKS4307-00A	Rew Arm Ass'y		1
62	VKR4202-001	Rew Gear		1
63	VKY4203-001	Return Spring		1
64	VKS4304-002	SW. Lever		1
65	VSH1105-002	Leaf Switch	MOTOR Muting	1
66	VSH1108-001	SW. Ass'y		1
67	VKS4310-001	Auto Stop Lever		1
68	VKL4887-001	Solenoid BKT		1
69	VGP0401-004	Solenoid		1
70	10E1	Si. Diode		1
71	VKS3134-001	Pause Lever (1)		1
72	VKS4313-001	Pause Lever (2)		1

# Enclosure Assembly and Electrical Parts (Except P.W. Board Parts)

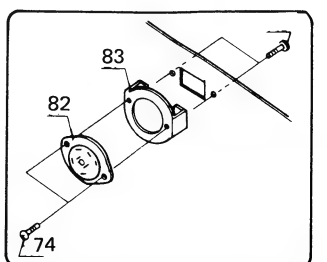


KD-D3A is no provided for voltage select switch.

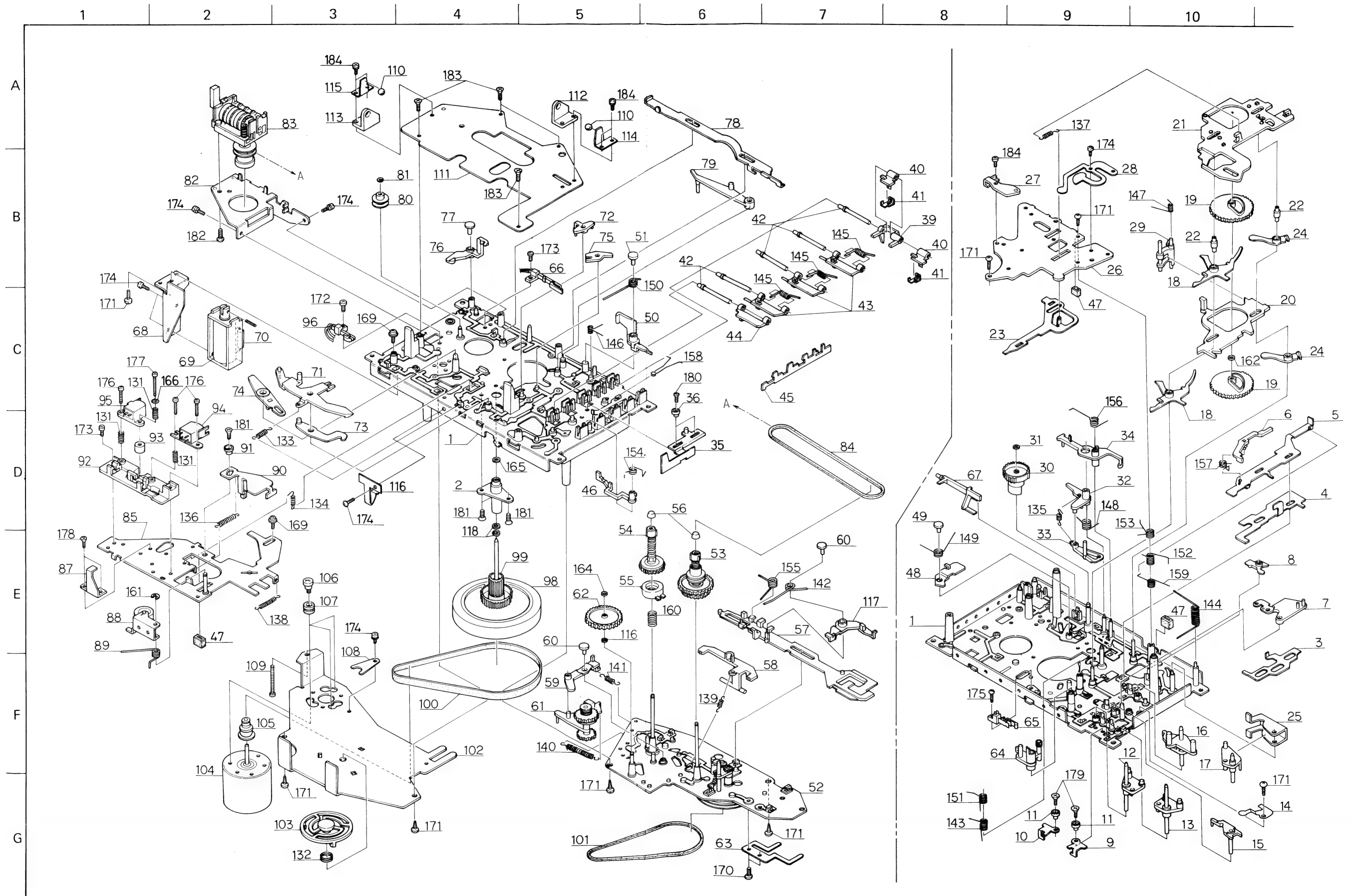
**KD-D3B/C/E/J**



**KD-D3U**



# Mechanical Component



Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
73	VKS4314-001	Cue Review Lever		1
74	VKS4315-001	Sw. Lever		1
75	VKS4316-001	Pause Lever (3)		1
76	VKS4318-002	REC. Safety Lever		1
77	VKS4174-001	Lock Bush		1
78	VKL4914-001	REC. Slide Bar		1
79	VKS4311-001	Muting Arm		1
80	VKR4205-001	Middle Pulley		1
81	VKZ4004-005	Special Washer		1
82	VKL3283-002	Counter BKT.		1
83	VKC5142-002T	Counter	VKC5142-003T=Counter Knob	1
84	VKB3000-019	Belt		1
85	VKL3279-00A	Slide Base Ass'y		1
86	VKZ4146-001	Rubber Stopper		1
87	VKL4922-001	Stopper	Cassette	1
88	VKP4115-00A	Pinch Roller Arm Ass'y		1
89	VKW4253-002	Pinch Roller Spring		1
90	VKL4923-001	Slide Base Arm		1
91	VKH3013-005	Flange Collar		1
92	VKS2102-001	Head Mount Base		1
93	VKH4215-001	Head Collar		1
94	VGH0421-003	R/P Head Collar		1
95	VGH0212-103	E. Head		1
96	VSH1102-001	Sw Ass'y		1
98	VKF3115-00C	Fly Wheel Ass'y		1
99	VKR3102-001	Fly Wheel Gear		1
100	VKB3001-011	Belt	Capstan	1
101	VKB3000-030	"	Take-up	1
102	VKL3269-001	F.M. Bracket		1
103	VKS4232-001	Fly Wheel Holder		1
104	MHI-5R2CHY	Motor		1
105	VKR4204-002	Motor Pulley		1
106	VKZ4109-001	Motor Screw		3
107	VKZ4130-001	Cushion Rubber		3
108	TFB345469-01	Rubber Stopper		1
109	VKZ4009-002	Special Screw	Earth	1
110	T41615-007	Steel Ball		2
111	VKL3274-002	Dual Ball Base		1
112	VKS4004-001	Ball Holder		1
113	VKS4004-002	"		1
114	VKY4201-001	Spring Plate		1
115	VKY4201-002	"		1
116	VKY4213-001	Solenoid Spring		1
117	VKS4337-001	Rew Spring Holder		1
118	Q03093-814	Washer	Thrust	1
119	VMZ0008-00A	Wire Ass'y	Earth	1
120	QET41HR-105N	E. Capacitor	Motor	1
121	VKZ4001-010	Wire Clamp		1
131	VKW3001-020	Compression Spring	R/P E Head	1
132	" -048	"	FlyWheel Holder	1
133	VKW3002-059	Tension Spring	Pause Lever (1)	1
134	VKW3000-021	"	Slide Base	1
135	VKW3002-029	"	Kick Lever-Select Arm	1
136	" -078	"	Slide Base Arm	1
137	" -045	"	Obstructive Board	1
138	" -063	"	Slide Base	1



Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
139	VKW3002-064	Tension Spring	Brake Arm	1
140	" -065	"	Rew Arm Ass'y	1
141	" -069	"	FF Arm	1
142	VKW3006-002	Torsion Spring	FF Bar	1
143	" -004	"	Trigger Lever	1
144	" -005	"	FF Drive Base	1
145	" -010	"	Play Button	3
146	" -007	"	Button Lock Cam	1
147	" -008	"	Lock Arm	1
148	" -009	"	Kick Lever	1
149				
150				
151	VKW4254-001	"	Trigger Lever	1
152	VKW4255-001	"	Play	1
153	VKW4256-001	"	FF	1
154	VKW4274-001	"	Rec Safety Bar	1
155	VKW4258-001	"	FF Bar	1
156	VKW4261-001	"	Stop Trigger Lever	1
157	VKW4262-001	"	Cue Lever	1
158	VKW4263-001	"	FF Rew Safety	1
159	VKW4267-001	"	Stop Trigger	1
160	This DWG	Spring	Back Tension Base	1
161	REE2500	E Ring	Pinch Roller Arm Ass'y	1
162	This DWG	Washer	Drive Gear	1
163				
164	This DWG	"	Rew Gear	1
165	Q03093-528	"	Oil Cut	1
169	SWSP2606Z	Screw	E Head	2
170	SBSB2604Z	Tap. Screw	Return Spring	2
171	SDSB2608Z	"	FF Lever Ass'y x 1 Cover x 2	3
172	SBSB2608Z	"	Leaf Switch x 2 Solenoid x 1 Rubber Stopper x 2	5
173	SPSP2004Z	"	Muting SW Ass'y x 1 Head Mount Base x 1	2
174	SPSP2604Z	"	Lever Return Spring x 1 Solenoid Spring x 1 Counter Bracket x 2 Earth Lug x 1 Rubber Stopper x 1	8
175	SPSB2608Z	"	Solenoid x 2 Leaf Switch	1
176	SPSX2010N	"	R/P E Head	3
177	SPSX2016N	"	E Head	1
178	SDSP2606Z	"	Sw. Ass'y	1
179	SSSP2004Z	"	Flange Collar	2
180	SSSP2005Z	"	Flange Collar	2
181	SSSP2604Z	Screw	Capstan Metal Ass'y x 3 Flange Collar x 1	4
182	SBSB2606Z	"	Counter	1
183	SSSB2608Z	"	Dual Ball Base	4
184	LPSP2606Z	"	Spring Plate	4
185	LPSP2604Z	Ass'y Screw	Cover	1

# Main P.W. Board Parts List

△ parts are safety assurance parts.  
When replacing those parts, make sure  
to use the specified one.

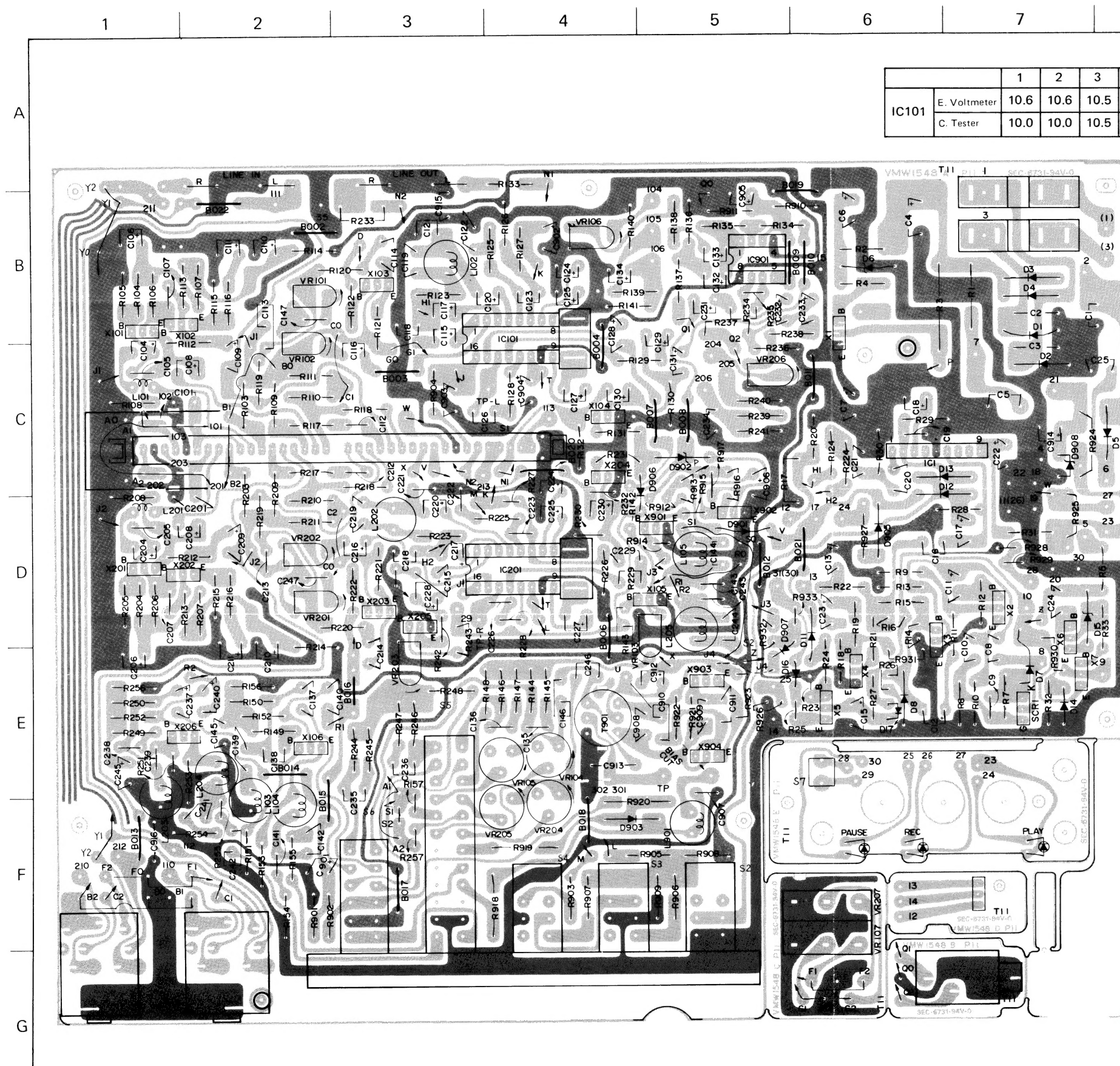
Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
R103,203	VMW1548-101A	P.W. Board	15kΩ 1/4W	1
140,240	QRD141J-153S	C. Resistor		4
R104,204	" -274SL	"	270kΩ "	2
R105,205	" -683SL	"	68kΩ "	4
106,206				
R107,207,134	" -124S	"	120kΩ "	3
R108,208,113	" -103S	"	10kΩ "	9
213,118,218				
8,15,21				
R109,209,110	" -121S	"	120Ω "	5
210,155				
R111,211	" -471S	"	470Ω "	2
R112,212	" -684S	"	680kΩ "	2
R114,214,156	" -222S	"	2.2kΩ "	6
256,904,17				
R115,215,131	" -152S	"	1.5kΩ "	6
231,153,253				
R116,216	" -101S	"	100Ω "	2
R117,217,141	" -123S	"	12kΩ "	5
241,909				
R119,219,	" -472S	"	4.7kΩ "	6
130,9,11,				
20				
R120,220	QRD141J-562S	C. Resistor	5.6kΩ "	4
13,28				
R121,221	" -274S	"	270kΩ "	2
R122,222,145	" -273S	"	27kΩ "	8
245,149,249				
24,902				
R124,224	" -223S	"	22kΩ "	4
152,252				
R125,225	" -680S	"	68Ω "	2
R126,226	" -105S	"	1MΩ "	2
R227	QRD143J-155S	"	1.5MΩ "	1
R127	QRD147J-155S	"	1.5MΩ "	1
R228,929	QRD143J-182S	"	1.8kΩ "	2
R128	QRD147J-182S	"	1.8kΩ "	1
R229,157	QRD143J-332S	"	3.3kΩ "	4
257,242				
R129,136,236	QRD141J-332S	"	3.3kΩ "	7
142,233,123,223				
R230,932	QRD143J-472S	"	4.7kΩ "	2
R232,251,916	" -104S	"	100kΩ "	2
R132	QRD147J-104S	"	100kΩ "	1
R133,30,925	" -332S	C. Resistor	3.3kΩ "	3
R234	QRD143J-124S	"	120kΩ "	1
R235	QRD143J-394S	"	390kΩ "	1
R135	QRD147J-394S	"	390kΩ "	1
R137,237	QRD141J-151S	"	150Ω "	2
R138,238	" -473S	"	47kΩ "	4
146,246				
R139,239	" -104S	"	100kΩ "	4
151,905				
R143,243	QRD143J-821S	"	820Ω "	2

Ref. No.	Parts No.	Parts Name	Remarks		Q'ty
R144,244,903	QRD141J-393S	C. Resistor	39k $\Omega$	1/4W	5
921,922	"	"	"	"	"
R147,247,18	" -333S	"	33k $\Omega$	"	3
R148,248,27	" -683S	"	68k $\Omega$	"	6
32,910,911	"	"	"	"	"
R150,250	" -125S	"	1.2M $\Omega$	"	2
R154,254	" -820S	"	82 $\Omega$	"	2
R255	QRD143J-121S	"	120 $\Omega$	"	1
R1	△ QRG019J-152	"	1.5k $\Omega$	"	1
R2	△ QRD149J-102S	"	1k $\Omega$	"	1
R3	△ QRX029J-8R2	M.F. Resistor	8.2 $\Omega$	2W	1
R4	△ QRD149J-330S	C. Resistor	33 $\Omega$	1/4W	1
R5,926	QRD121K-122	"	1.2 $\Omega$	1/2W	2
R7	QRD141J-102S	"	1k $\Omega$	1/4W	1
R10	QRD147J-272S	"	2.7k $\Omega$	"	1
R12,901	QRD141J-563S	"	56k $\Omega$	"	1
R14,16	QRD143J-563S	"	56k $\Omega$	"	2
R19	QRD147J-682S	"	6.8k $\Omega$	"	1
R22	" -470S	"	47 $\Omega$	"	1
R23,26	QRD143J-223S	"	22k $\Omega$	"	2
R25	" -151S	"	150 $\Omega$	"	1
R29	QRD147J-474S	"	470k $\Omega$	"	1
R31,33	△ QRD149J-471S	"	470 $\Omega$	"	2
R906	QRD147J-561S	"	560 $\Omega$	"	1
R907	" -392S	"	3.9k $\Omega$	"	1
R908	" -822S	"	8.2k $\Omega$	"	1
R912,914	QRD143J-562S	"	5.6k $\Omega$	"	2
R913,933	" -103S	"	10k $\Omega$	"	2
R915	" -6R8S	"	6.8 $\Omega$	"	1
R917	QRD121K-272	"	2.7k $\Omega$	"	1
R918	△ QRG019J-331	O.M.F Resistor	330 $\Omega$	1W	1
R919	△ " -151	"	150 $\Omega$	"	1
R920	△ QRD126K-150	C. Resistor	15 $\Omega$	1/2W	1
R923	△ QRD149J-100S	"	10 $\Omega$	1/4W	1
R924	△ QRG019J-680	O.M.F Resistor	68 $\Omega$	1W	1
R927	QRD121K-681	C. Resistor	680 $\Omega$	1/2W	1
R928,930	QRD143J-222S	"	2.2k $\Omega$	1/4W	2
R931	" -225S	"	2.2M $\Omega$	"	1
C101,201	QCS11HJ-471	C. Capacitor	470pF	50V	4
105,205	"	"	"	"	"
C104,204	QEB41EM-475M	E. Capacitor	4.7 $\mu$ F	25V	4
109,209	"	(Low Leak)	"	"	"
C106,206,108	" -476M	"	47 $\mu$ F	"	5
208,24	"	"	"	"	"
C107,207	QCS11HJ-680	C. Capacitor	68pF	50V	2
C110,210	QET41ER-336N	E. Capacitor	33 $\mu$ F	25V	2
C111,211	QET41AR-107N	"	100 $\mu$ F	10V	2
C112,212	QFM41HJ-822	Mylar Capacitor	0.0082 $\mu$ F	50V	2
C113,213	" -182	"	0.0018 $\mu$ F	"	4
135,235	"	"	"	"	"
C114,214,118	" -103	"	0.01 $\mu$ F	"	7
218,141,241	"	"	"	"	"
20	"	"	"	"	"
C115,215	QEB41HM-105M	E. Capacitor	1 $\mu$ F	"	4
116,216	"	(Low Leak)	"	"	"

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
C117,217,120 220,130,230 137,237,140 240,901,902	QET41HR-105N	E. Capacitor	1 $\mu$ F 50V	12
C119,219 139,239	QCS11HJ-151	C. Capacitor	150pF "	4
C122,222	QFM41HJ-273	Mylar Capacitor	0.027 $\mu$ F "	2
C123,223 121,221 142,242	" -222	"	0.0022 $\mu$ F "	6
C124,224	QEB41HM-334M	E. Capacitor (Low Leak)	0.33 $\mu$ F "	2
C125,225	" -475M	"	47 $\mu$ F "	2
C126,226	QFM41HJ-332	Mylar Capacitor	0.0033 $\mu$ F 50V	2
C127,227	QET41CR-227N	E. Capacitor	220 $\mu$ F 16V	2
C128,228	QET41HR-475N	"	4.7 $\mu$ F 50V	2
C129,229,131 231,10	" -335N	"	3.3 $\mu$ F "	5
C132,232	QET41CR-476N	"	47 $\mu$ F 16V	2
C133,233	QEB41HM-104M	E. Capacitor (Low Leak)	0.1 $\mu$ F 50V	2
C134,234,11	QET41ER-226N	E. Capacitor	22 $\mu$ F 25V	3
C136,236	QFM41HJ-152	Mylar Capacitor	0.0015 $\mu$ F 50V	2
C138,238	" -124	"	0.12 $\mu$ F "	2
C143,243	QCS11HJ-391	C. Capacitor	390pF "	2
C144,244	QCS12HJ-151	"	150pF 500V	2
C145,245,914 12,22	QET41ER-476N	E. Capacitor	47 $\mu$ F 25V	5
C146,246	QCY12HK-221	C. Capacitor	220pF 500V	2
C147,247	QFM41HJ-122	Mylar Capacitor	0.0012 $\mu$ F 50V	2
C1,6,25	△ QET41ER-477N	E. Capacitor	470 $\mu$ F 25V	3
C2,3	△ QCF12HP-103	C. Capacitor	0.01 $\mu$ F 500V	2
C4,5	△ QET41HR-477N	E. Capacitor	470 $\mu$ F 50V	2
C7	△ QET41ER-337N	E. Capacitor	330 $\mu$ F 25V	1
C8	QEN41HA-105N	N.P.E. Capacitor	1 $\mu$ F 50V	1
C9	QCF11HP-223	C. Capacitor	0.022 $\mu$ F "	1
C13	QEB41EM-336M	E. Capacitor (Low Leak)	33 $\mu$ F 25V	1
C15,903	QET41ER-107N	E. Capacitor	100 $\mu$ F "	2
C16	QEN41EM-226	N.P.E. Capacitor	22 $\mu$ F "	1
C17,23 904,905	QET41HR-106N	E. Capacitor	10 $\mu$ F 50V	4
C18	" -104N	"	0.1 $\mu$ F "	1
C19	QFM41HJ-683	Mylar Capacitor	0.068 $\mu$ F "	1
C21,909,910	" -472	"	0.0047 $\mu$ F "	3
C906	QET40JR-227N	E. Capacitor	220 $\mu$ F 6.3V	1
C907	QCF11HP-472	C. Capacitor	0.0047 $\mu$ F 50V	1
C908	QFP82AJ-103	P.P. Capacitor	0.01 $\mu$ F 100V	1
C911	QFM41HJ-153	Mylar Capacitor	0.015 $\mu$ F 50V	1
C912	QET41HR-474N	E. Capacitor	470 $\mu$ F "	1
C913	QFP82XJ-152	P.P. Capacitor	0.015 $\mu$ F "	1
C915,916	QCS11HJ-121	C. Capacitor	120pF 50V	2
VR101,201,102 202,103,203	QVP8A0B-024	V. Resistor	20k $\Omega$ "	6
VR104,204 105,205	QVP4A0B-104	"	100k $\Omega$	4

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
VR106,206	QVP8A0B-014	V. Resistor	10k $\Omega$	2
L101,201	TAC000493-01	Inductor		2
L102,202,103	VQP0001-183S	"		6
203,105,205				
L104,204	" -562S	"		2
L901	" -102S	"		1
T901	VQH1009-018	OSC Coil		1
	VYH4514-002	Shield Case		1
D1~5,7	$\Delta$ 10E1-B	Si. Diode		6
D6	$\Delta$ RD22E(B3)	Zener Diode		1
D8,11~14	MA150	Si. Diode		12
16,17,901				
903,905~907				
D15	$\Delta$ RD13E(B3)	Zener Diode		1
D902	RD6.8E(B3)	"		1
D908	RD15F(B)	"		1
IC101,201	AN7362N	IC	ANRS	2
IC901	UPC4557C	"		1
IC1	BA335	"		1
X101,201	2SC1845(E,U)	Si. Transistor		4
102,202				
X103,203,104	2SC945A(PA,KA)	"		8
204,2,3				
901,902				
X105,205	2SC2001(L,K)	"		2
X106,206	2SC923(E,U)	"		2
X1	$\Delta$ 2SC1162(B,C)	"		1
X4,5,6	2SA733A(P,Q)	"		3
X7	2SD471(LA,KA)	"		1
SCR1	$\Delta$ 03P05M	S.C.R		1
X903,904	2SD863(E,F)	"	or 2SC2274(E,F)	2
S1	OSSC201-101T	Slide Switch	for Rec/PB	1
S2,3,4,5,6	OSP0259-156	Push Switch	for Function	1
	VMH4003-001	Heat Sink	for X1	1
	LPSP3008ZS	Screw	"	1
	SSSP3006ZS	Screw	Heat Sink~P.W.B	1
	E43727-002	Tab		49
	VMZ0005-001	Post Pin		5
	QWY123-019	Bus Wire		20
	QMS6313-008	Jack Ass'y	for Mic	2
	"	"	KD-D3A/B/C/E/U	
	QMS6302-110	"	KD-D3J	2
	VMA4119-001	Shield Plate		1
	VYH4514-001	Shield Case	for L105,205	2
	TAZ000331-02	Fuse Holder	KD-D3B/E/U	4
	$\Delta$ QMF51A2-R63BS	Fuse	KD-D3B	2
	$\Delta$ " -R63	"	KD-D3E/U	2

## Main P.W. Board Parts



		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
IC101	E. Voltmeter	10.6	10.6	10.5	10.6	10.8	10.8	10.6	10.6	10.8	21.6	1.5	10.7	10.9	10.9	10.9	1.2
	C. Tester	10.0	10.0	10.5	10.0	11.0	11.0	10.5	10.5	10.5	21.5	1.5	10.5	11.0	11.0	11.0	1.2


		1	2	3	4	5	6	7	8	9
IC1	E. Voltmeter	1.9	0	1.9	—	0	0	—	—	10.1
	C. Tester	1.2	0	2.0	—	0	0	—	—	10.0
IC901	E. Voltmeter	10.8	10.8	10.8	0	10.8	10.8	10.8	21.6	
	C. Tester	11.0	11.0	10.5	0	10.5	11.0	11.0	21.5	


	E. Voltmeter			C. Tester		
	E	C	B	E	C	B
X101	0.9	1.9	1.5	0.9	1.6	1.2
X102	1.3	12.0	1.9	1.2	(50V range) 11.0	1.6
X103	0	0	0.7	0	0	0.6
X104	0	0	0	0	0	0
X105	0	0	0	0	0	0
X106	0.9	6.8	1.5	0.9	6.6	1.1
X1	21.6	27.6	22.3	21.5	28.0	22.0
X2	0	21.6	0	0	21.5	0
X3	0	0	0.7	0	0	0.7
X4	21.6	0.6	21.2	21.5	0.5	21.0
X5	20.6	20.6	19.9	20.5	20.0	20.5
X6	7.6	7.4	6.9	7.4	7.2	6.75
X7	0	0	0.8	0	0	0.75
X901	0	0.7	0.25	0	0.7	0.2
X902	0	0.1	0.7	0	—	0.7
X903	1.1	18.6	0.5	1.1	18.6	0.3
X904	1.1	18.6	0.5	1.1	18.6	0.3
SCR	A 29.5	K 0	G 0	A 29.5	K 0	G 0

Voltage values are measured by the following meter without input signal at playback mode.

C. Tester = Circuit Tester (20k $\Omega$  impedance)

E. Voltmeter = Electronic Voltmeter

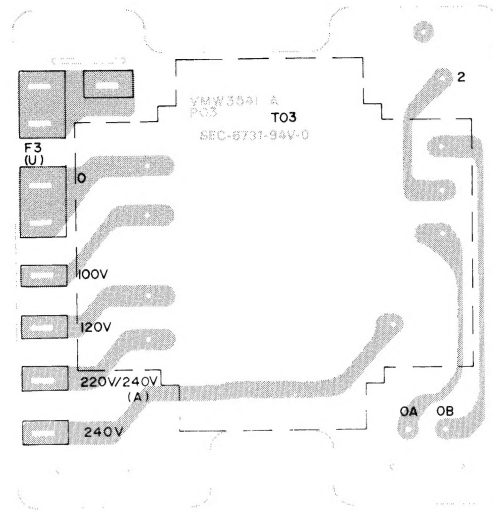
 +B

 Earth

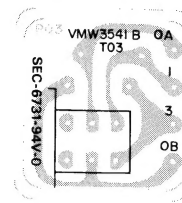


# Other P.W. Board Parts

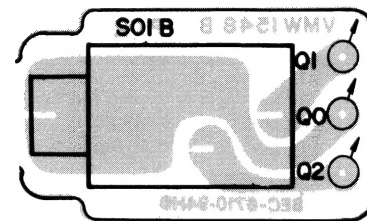
Power Transformer



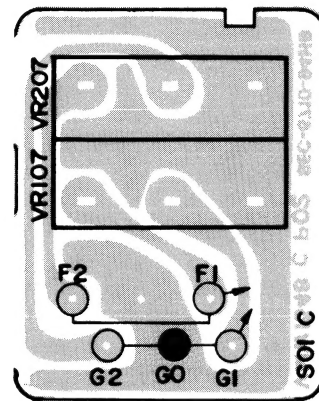
Push Switch



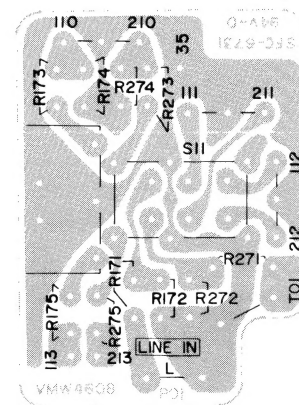
Headphone



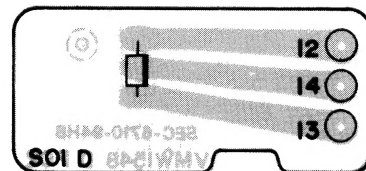
Input Volume



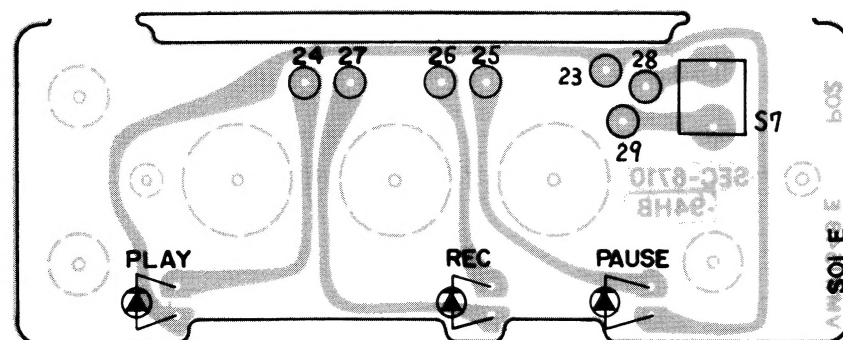
DIN



Hall IC



Indicator

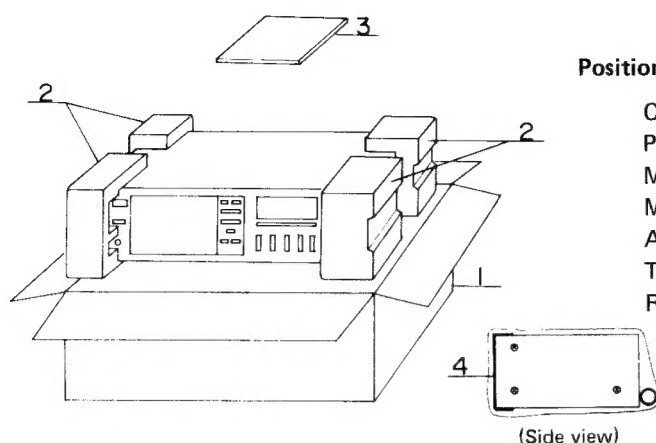


Other P.W. Board Parts List

△ parts are safety assurance parts.  
When replacing those parts, make sure to use the specified one.

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
(Power Transformer)	△ VMW3541-003A E40130-001	P.W. Board Tab		1 2
(Power Switch) S01	△ VMW3541-003B △ QSP0210-016BS △ QSP0210-016	P.W. Board Push Switch "	(KD-D3A/B) (KD-D3C/E/U)	1 1
(DIN) R171,271 172,272 R173,273 R174,274 R175,275	△ VMW4608-001 QMC9014-007 QSP2210-061 QRD143J-683S " -102S " -223S " -332S VMZ0005-001	P.W. Board DIN Socket Push Switch C. Resistor " " " " " " Post Pin	for DIN 68kΩ 1/4W 1kΩ " 22kΩ " 3.3kΩ "	1 1 1 4 2 2 2 4
(Headphone)	VMW1548-101B QMS6302-110	P.W. Board Jack Ass'y		1 1
(Input Volume) VR107,207	VMW1548-101C QVE5A3A-054F TAZ336499-03	P.W. Board V. Resistor Volume Lug		1 1 1
(Hall IC)	VMW1548-101D DN6835	P.W. Board Hall IC		1 1
(Indicator) D961 D962,963 S7	VMW1548-101E GL-9PR2 GL-9NGS1 QSP0022-003	P.W. Board L.E.D " Push Switch	Red Green	1 1 2 1
(Level Indicator) R191,291 C951 C191,291 CN951	LT-1011 QRD147J-472S QET41ER-226N QET41HR-105N QMV5005-008	LED Ass'y C. Resistor E. Capacitor " Plug Ass'y	4.7kΩ 1/4W 22μF 25V 1μF 50V	1 2 1 2 1

# Packing



Position of control and switch knobs at renew packing.

Counter reset ; 000  
Power switch ; OFF  
Mecha operation buttons ; OFF  
Music scanning switch ; OFF  
ANRS switch ; OFF  
Tape select switch ; SF/NORM  
Rec level control ; MIN.

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
1~3	VDP2077-002A	Case Ass'y	KD-D3A/B/E/J/U	1
	" -003A	"	KD-D3C	1
1	VPD2077-J02	Case	KD-D3A/B/C/E/J/U	1
	" -J03	"	KD-D3C	1
2	VPH3118-001	Cushion (L)		1
	VPH3119-001	" (R)		1
	QPGA060-06005	Envelope	for Unit	1
3	AP4056B-077	"	for Inst.	1
4	TKS000501-01	Sheet	for Unit	1

# Accessories

Parts No.	Parts Name	Remarks	Q'ty
VYA4001-00A	Head Cleaning Stick	KD-D3A/B/C/E/J	1
VYA4001-001	"	KD-D3U	1
VNN0075-301	Instruction Book		1
BT20029B	Warranty Card	KD-D3A	1
BT20013C	Guarantee Certificate	KD-D3B	1
BT20025D	Warranty Card	KD-D3C	1
BT20032B	"	KD-D3J/U	1
TJL000443-01	Seal	KD-D3B	1
VND4013-001	Warning Label	for Disconnection KD-D3A/B/E	1
QZL1002-003BS	"	for 2-Pin Power Cord KD-D3B	1
T46328-003	Caution Label	for V. Selector KD-D3B	1
T46328-004	"	" KD-D3E	1
T46328-001	"	" KD-D3U	1
TLT000505-01	UL/CSA Caution Label	KD-D3C/J	2
BT20042	Special Reply Card	KD-D3J/U	1
BT20044B	Safety Instruction	KD-D3J	1
E7795-1	EP Mark	KD-D3U	1
V04062-001	Siemens Plug	KD-D3U	1
VNC5004-001	Mark Sticker	DIN 45500 KD-D3B/E	1
BXN750110UU	JVC Microphone Guide	KD-D3B/E	1
VND4016-001	Metal Sticker		1
VPZ4001-001	Serial Ticket	KD-D3A/B/E/J/U	1
T43758-003	"	KD-D3C	1
VNC5311-101	Caution Card		1